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Volume 18, Number 1
January 1976

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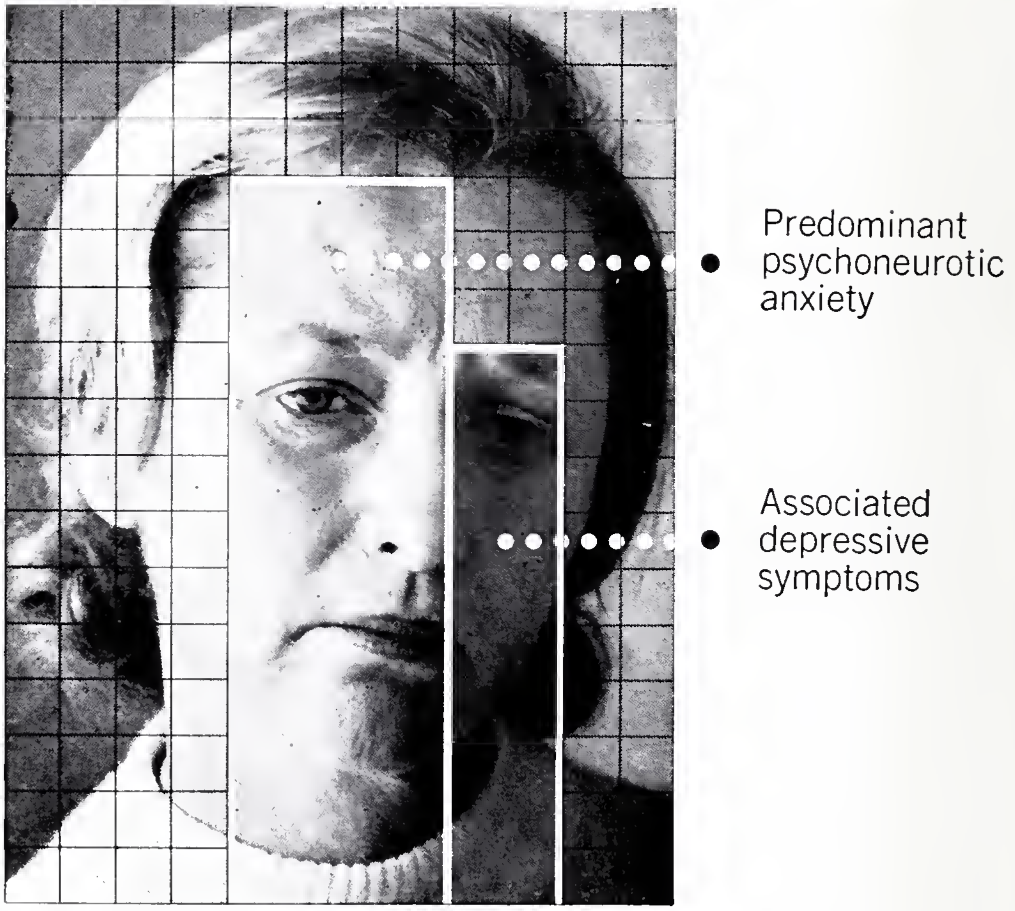

Predominant psychoneurotic anxiety
Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frec
and/or severity of grand mal seizur
require increased dosage of standar
convulsant medication; abrupt with
may be associated with temporary i
crease in frequency and/or severity
seizures. Advise against simultaneo
gestion of alcohol and other CNS de
sants. Withdrawal symptoms (simila
those with barbiturates and alcohol)
occurred following abrupt discontin
(convulsions, tremor, abdominal an
cle cramps, vomiting and sweating)
addiction-prone individuals under c

respond to one

According to her major ymptoms, she is a psychoneu- otic patient with severe nxiety. But according to the escription she gives of her elings, part of the problem ay sound like depression. his is because her problem, though primarily one of ex- essive anxiety, is often accom- anied by depressive symptom- ology. Valium (diazepam) n provide relief for both—as e excessive anxiety is re- eved, the depressive symp- ms associated with it are also ten relieved.

There are other advan- ges in using Valium for the anagement of psychoneu- tic anxiety with secondary epressive symptoms: the ychotherapeutic effect of alium is pronounced and pid. This means that im- ovement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium®
(diazepam)
2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

urveillance because of their predisposi- on to habituation and dependence. In regnancy, lactation or women of child- earing age, weigh potential benefit gainst possible hazard.

recautions: If combined with other psy- hotropics or anticonvulsants, consider arefully pharmacology of agents em- loyed; drugs such as phenothiazines, arcotics, barbiturates, MAO inhibitors nd other antidepressants may potentiate s action. Usual precautions indicated in atients severely depressed, or with latent epression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Nutley, New Jersey 07110

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Alaska Medicine will consider for publication any original material of possible interest to our subscribers. Color or black and white photographs, slides, or negatives are acceptable. Reproductions will generally be black and white. Reprints should be ordered at the time of submission. Authors will be sent three complimentary copies of the journal in which their work appears.

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Eskimo Drummer, Soapstone Sculpture by Jacques Regat, Anchorage artist - a contemporary interpretation of traditional Eskimo life in the Arctic - The return of the hunter, adventures on the frozen sea, legends, events of everyday life sung and danced to the haunting rhythm of the drum -

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RECOMMENDATIONS OF THE GOVERNOR'S MEDICAL MALPRACTICE INSURANCE COMMISSION — A POSITIVE VIEW

Richard Witt, M.D.

The problem at hand is the availability of adequate medical malpractice insurance. The latest survey by the Alaska State Medical Association indicates that by early 1976, some 35 to 40 percent of the private practice physicians in the State will be without insurance. Many others have insurance policies which are inadequate in that they restrict certain aspects of practice or require the physician to be reclassified into a higher rise category — hence, higher premiums — or the policies do not provide coverage over a sufficient period of time. In addition, the charges for such policies have been skyrocketing. Most companies have been withdrawing from the field and, in fact, the last remaining company is said to be leaving by May of 1976. (It is acknowledged that clinics or groups in private practice have still been able to obtain adequate insurance at apparently reasonable rates.)

In addition, to the physicians, a number of the hospitals in the state are also either being charged much higher rates or cannot obtain insurance.

In response to this crisis, the Governor appointed a commission to make recommendations on how to solve the dilemma. The group was chaired by the Commissioner of Commerce and Economic Development for the State of Alaska. The commission itself was made up of concerned people from medicine, dentistry, nursing, the legal profession, the insurance industry, the legislature, both the Senate and the House, and the people. It was served by a very able consultant from the insurance sector. The actions of the commission were, to my mind, nonpartisan. Their efforts were studied, intense, unrelenting, and dedicated to the singular purpose of finding a solution to the problem. This is, to make medical malpractice insurance available to those in need, at a reasonable cost, while at the same time protecting the rights of all concerned.

The report of the Governor's Medical Malpractice Insurance Commission dated October 1, 1975, and the supplement dated October 31, 1975, which puts the recommendations in bill form are available either from the medical association office or Commissioner's office. It need not be repeated here.

My analysis of the 27 recommendations in the "package" is as follows. Please bear in mind that the objective is to make insurance available to all at a reasonable cost. There are four main areas of interest and involvement in the total package of recommendations. These are:

A. Those recommendations which make the predictability of losses more reasonable for the insurance companies.
B. Those recommendations which tend to reduce the expenses of trials and amounts of awards, and
C. Those which improve the loss control for the doctors, and provide for proper physician disciplinary action when needed and thus serve to improve the level of care. Theoretically this will decrease the number of malpractice suits.
D. Those recommendations which provide for actual insurance coverage.

A. In relation to making losses more predictable recommendation No. 1 is probably the most important and may be the most difficult to comprehend. This recommendation states that the liability of the health care provider ends three years after the occurrence. Thus the individual M.D. is not personally liable three years after a negligence occurrence — nor is his insurance company. Of utmost importance here is that there has been no real tampering with the rights of the claimant. The claimant may bring suit after the three years. In this case the Late Claims Fund (No. 19) becomes liable and will pay awards if the claimant proves with evidence "clear and convincing" that he was harmed by medical negligence or other malpractice.

Other of the recommendations serving to make insurance losses more predictable are:

2. All available collateral sources are to be subtracted from the award.
3. Doctors are insured from liability when administering emergency medical care to a person who is not his patient (i.e.) Code 99, etc.
4. No promise to achieve a certain medical result is valid unless that promise is in writing and signed by the health care provider.
5. The definition of medical negligence is improved by adopting the "Standard of the profession" rather than a local community standard, limiting the standard to that at the time of the act and imposing the standard appropriate under all circumstances under which the health care provider was acting.
6. Cases brought more than three years after the date of the incident must be proven by evidence that is "clear and convincing."

B. Recommendations Nos. 7 through 12 have to do with streamlining court proceedings, making truth findings quicker and hopefully more accurately and making awards in a more equitable manner.

7. provides for the appointment of a medical expert panel to consist of two physicians and one other health care provider of the same discipline as the provider charged. The medical expert panel would act prior to any trial proceedings, investigate the matters and report the medical facts.
8. The findings of the medical expert panel will be admissible as evidence and the panelists subject to cross-examination. (This keeps the matter constitutional.)

9 and 10 establish a medical adjudication board. The board consists of nine citizens, nonmedical or legal, three physicians and one judge. An actual trial board would consist of three citizens, one physician and one judge. They would hear all the evidence, arrive at a verdict and make awards. Appeal would be to the supreme court on points of law only.

The Attorney General has ruled that this board is unconstitutional as far as the State of Alaska Constitution and Common Law are concerned.

10. provides for the Legislature to initiate a resolution to amend the Constitution in order to establish the medical adjudication board.
11. provides that awards for future income and continuing medical care be paid periodically rather than in a lump sum. Payments would end at death.
12. itemizes awards. This is mainly for record keeping and learning the Alaska experience so that premiums will eventually be based on data from Alaska per se.

C. Recommendations No. 13 through No. 18 establish the means for actually providing the necessary insurance.

A Health Care Providers Indemnity Corporation will be established and regulated by the state under the Director of Insurance in the Department of Commerce. Participation will be mandatory for all health care providers but each category (i.e. doctors, nurses, dentists, etc.) will stand alone on their own experience. The mandatory proviso is necessary because of the small numbers in Alaska. No company will be interested without "capturing" the business of all 315 doctors, not just the 25 percent or so currently not insured. The insurance will be noncancellable, claims made insurance obtained from domestic carriers on bid. The state will guarantee that insurance is available, ostensibly for a reasonable fee. In the event that domestic companies do not come through, then a joint underwriting association (J.U.A.) held in a stand-by status can be implemented by the Director of Insurance. (Note: The Anchorage Medical Society voted to be in favor of J.U.A. insurance being on a nonmandatory basis.)

The insurance to be provided is to be retroactive to January 1975, for those health care providers who desire such retroactive insurance, for an additional premium.

Recommendation 19 sets up the Late Claims fund to be financed by premiums paid by health care providers, estimated at 10-15 percent of the regular premium. The state will guarantee this fund. It will have three years to grow before any claims can be made.

It is this fund which makes the regular insurance loss more predictable and which protects the rights of the citizen to be able to bring his claim at any time, i.e., without undue statute of limitation. The doctor might be named in the late claims suit but would not be personally liable. The concept of "clear and convincing evidence" holds for these late claims.

Nos. 20 and 21 have to do with record keeping so that the actual Alaskan experience will be documented. No one knows what the real experience has been — anywhere!

D. Item 22 prescribes what informed consent will be. Nos. 23 through 27 provide funds for and authority to the State Licensing Boards (re) the State Medical Examining Board to be able to investigate and to properly render necessary disciplinary actions. Such actions include reprimand, censure, place on probation, restrict practice by time, specialty procedure or facility or to require continuing education or retraining, or license suspension. At this time the Medical Board is really powerless and ineffectual. Provision is also made for loss control procedures by providers.

The Anchorage Medical Society has voted to support all 27 recommendations. It basically opposes the mandatory nature of the Health Care Providers Indemnity Corporation, but understands the current necessity. It recommends that the Legislature empower itself to review the Indemnity Corporation, especially the mandatory requirements after five years. It further feels that should the J.U.A. become necessary that such insurance not be made mandatory but that the provider be allowed to seek his insurance where he can find it.

Speaking in favor of these recommendations, I would mention several facets. First and foremost, the package delivers the first objective as far as the physicians are concerned. That is, medical malpractice insurance will be available to all. The state guarantees this.

Secondly, the package deals directly and indirectly with the cost factor. If the Director of Insurance finds that domestic companies are not available to provide insurance at a "reasonable cost" he can invoke the J.U.A. and apparently can exert control over rates. In addition, the many other provisions listed will tend to streamline court procedures and thus reduce costs. Awards will be reduced by subtracting collateral sources and since the Alaska experience will be documented we in Alaska will pay premiums based on our own risk factor and not that of some other state or states. Hopefully, with teeth in the Medical Examining Board and our own vigilance we can keep the experience good. In this regard, the medical expert panel, serving as a friend of the court, and determining the medical facts will be able to interpret to the courts the difference between natural history of disease, bad results, and disappointment and what is actually malpractice.

Limiting the period of liability of the provider to three years while not really tampering with the "statute of limitations" and the rights of the patient makes the use of "claims made" type insurance feasible. This is especially so in view of the noncancellability of the policy as the state guarantees that the insurance will always be available. Of great importance to making this latter aspect work is the so-called late claims fund which is to be liable for all judgments of claims brought after the three-year period of liability of the provider. This serves to make the shortened period of liability possible and the use of "claims made" insurance practical. It further protects the patients' rights. This is particularly true for children and for other situations where injury can only be discovered late. The bone of contention here lies in an added premium of an as-yet-unknown amount. In this regard, the proposal is that the state will guarantee the fund. If the rest goes as planned, the premium should be livable.

To me the recommendations encompass much of what the "Doctors Bill" proposed. Great effort has been expended to study all aspects of the problem. Our own interests as well as those of the public appear to have been well-served. The package seems to be of considerable benefit to interested insurance companies who, of course, do not intend to take any risks but have a corporate need to show a profit while insuring our risks.

I agree with those who point out that the padrage also favors the attorneys and does nothing to limit or restrict them in any way. In this regard, the Anchorage Medical Society has voted to support legislation which would place reasonable limits on lawyers' contingency fees. Further, this body in their concern over the unreasonably large awards being made elsewhere adding greatly to the entirety of the crisis, has voted to support legislation placing reasonable limits on awards made to claimants. The Society is concerned for the anguish expense, and nuisance of illegitimate suits, and is supportive of legislation providing for the concept of right to redress. Finally, it feels that evidence should be "clear and convincing" in all medical malpractice suits.

I feel that the commission's recommendations constitute a social document of tremendous possibility. It embodies a surprisingly large amount of what we physicians originally proposed in our "Doctors Bill." If the great majority of the package is passed into law by the legislature, the climate for reasonably priced insurance should be assured and thus the private practice of medicine protected for at least a while.

The clinics and groups and some individuals will naturally and rightly have objections to various portions as will certain of the other health care providers. In the interest of the larger view, however, I would like to urge all to support as much of the entire package as they can as I really feel that in the long run it will prove to their advantage. A year or so ago most of us were quite secure with our own insurance and its features and cost. Quite without much in the way of heeded warning, this comfort changed. Such could happen to those now as happy — overnight. The proposed package would seem to be a good bet to protect against such perfidy.

The commission has served well. The baton has passed to the legislature. We must now make our position clear to those beleagured people and encourage their prompt and informed action. I encourage you to take a stand. I urge you to support the entire package. □

HAPPY NEW YEAR

MALPRACTICE CRISES AND COMMISSIONS — COUNTERPOINT

Winthrop Fish, M.D.

A point-by-point critique of the commission report would be futile. Better try to reflect on our goals, what we might conceivably gain, or lose. Some reflections follow.

During the 1973 ASMA meeting, I submitted — while en route to Tahiti, I must blushingly confess — this resolution:

> Resolved, that the ASMA procure a rubber stamp to be applied reflexly and unerringly to any and all correspondence referring to our membership as "health care providers," such stamp to read, "Return To Sender! There Are No Health Care Providers Here. We Are Physicians And We Treat Or Try To Prevent Disease. Health Care Providers Are Someone Else, Probably Politicians. Please Redirect Your Correspondence."

The resolution was evidently considered frivolous.

So now, Dear and Glorious Physician, an HCP you would be.

Definition: "HCP means a chiropractor, a dental hygienist, a dentist, a nurse, a dispensing optician, an optometrist, a pharmacist, a physical therapist, a physician, a podiatrist, a psychologist and psychological associate, and a hospital." Did you spot us? But where are the CMAs, the respiratory therapists, the lab techs, the LPNs, the aides? Where are the pump techs, the orthopedic suppliers, the detail men, the massage parlors, Apple Mary? Medex, PAs, paramedics? Ann Landers? Voluntary health agencies?

It could make you cry. Your traditions, discipline, your years of work, your M.D., your boards, your fellowships, submerged in an amorphous mass by legislative fiat. For expediency. Galen must be writhing.

There is no intent to knock the chiropractors or other HCPs. We've done it through the AMA for years. Even if we didn't feel a bit sheepish asking them to bail us out, under the circumstances they may not rush for the honors.

And there is no intent to suggest that we are the only ones who have worked hard for something to be proud of and call our own. One suspects the RNs feel that way about their RNs, as do the CMAs and DDSs, et al. Did they ever vie to become HCPs, tied to us financially and dependent upon our insurance policy for their license to work?

We struggle for the chance at a rewarding life, to find challenges and risks, and by meeting and surmounting them to find some fulfillment. Medicine alone should offer plenty. But we want more. Our virility, our egos, demand it. We flit about in little planes, scuba in icy murk, climb mountains, dare avalanches, drink and drive, hang glide, and smoke, leaving our wives a-tremble or widows.

We plunge in the stock market, watch it fall. We marry in haste, divorce in droves, lose our homes and possessions to larcenous lawyers and departing wives, and are heroes of a sort in the doctors' lounge. But comes the threat, just the threat, of a malpractice suit, and we scurry and hide under the nurses' skirts or the chiropractors' tables, give ourselves to the pols, and make a lemming's rush to the obliteration of our professional identity.

Since this thing began, the track record for the insurance companies in the credibility department has been a flat zero. But with each smooth subterfuge exposed, we accepted the next offered like Moses had brought it off the Mount, or grasped at it like it wasn't a leaden straw. The commission accepted the propaganda that "Spreading the Risk" and maximum participation throughout and confined to Alaska were prereqs to any insurance solution. Thus was born the Alaska HCP Indemnity Corp. concept. Now this either "spreads the risk" between an incompetent orthopod and a competent chiropractor — or, each class of risk is

(Continued on Page 6)

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socio-economic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

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indemnified separately and rated accordingly. If the former, the dark suspicions of the unthreatened HCPs are fully justified; the alternate, of course, spreads no risk at all to speak of, but does guarantee maximal bucks in the Inscomps' coffers — and a tight government licensing lock on the entire group of professions and allied occupations. Spread the risk if you will, but don't expect to legislate people into it, hook their livelihoods onto it, and have them love you for it.

There is much more that we can't approach here, questions unanswered except by faith in the legislators. The rate structure? Efficiency? Time demands? Progressive restrictive legislation? Constitutionality? Efficacy? Overload? Premium inequalities and redress? Administrative morass? All valid questions. All unanswered. All uncertain. But the fetters, loss of dignity, alienation of friends — these are certain. The enemy is ours, not theirs, and we can't force the others into alliance.

For we are clearly under siege. The others aren't and won't be. To understand you have to identify the enemy.

The enemy is not the lawyers, not the Inscomps, not the Pols, and not the disgruntled litigants. They are only the mercenaries. The enemy is a conglomerate of iatropistiacs and iatromisiacs, envious and greedy on one hand, outraged and resentful of misplaced trust on the other. Envious of our calling, traditions, prestige and charisma; greedy for the fruits of our economic success; resentful of our arrogance, ostentation and discourtesies. Those whom we would force to join us share none of this. Those who do share, however, are a large group of unpolled docs who also oppose the Commission Creation, but seemingly prefer to stand defenseless and at risk or pay tribute, rather than actively enter this fray.

If we would fight, we must first recognize that there is a war and act accordingly. We must also identify and define common purpose(s) if in truth such really exist. I think we can find common purpose but only if we recognize enemy goals: strip us, out of greed; control us, out of envy. Finding purpose, we can fight to prevent those things. The commission approach is surrender. We surely would be controlled — probably stripped.

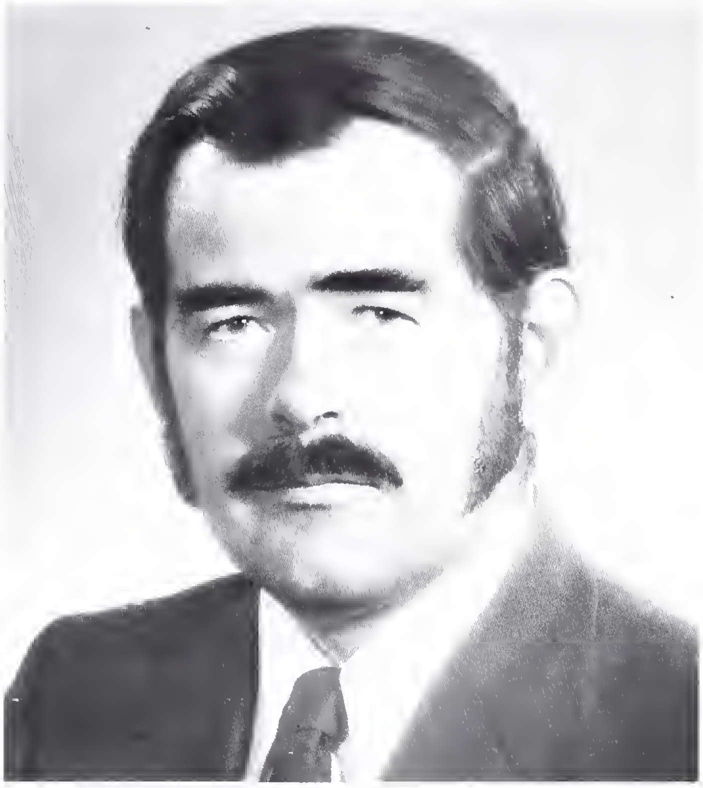
We should then shun or drive out those who give aid and comfort to the enemy, particularly those who are spies in our midst and who would sell us out in court for unconscionable fees. We should criticize those who flaunt their wealth. We should seek out and organize strong friends and allies, particularly those within the enemy camp, who would preserve if they could a medical system they like, who individually decry an archaic self-seeking legal system but cannot effectively unite in protest. We should silence the arrogant and abrasive voices among us who lose our battles with their intemperate vituperation. And we should constantly challenge our excessively liberal leadership which would legislate socialism in the name of social consciousness. We must strengthen our defenses with the best legal talent money can buy and not tolerate losses because of shoddy, incompetent defense.

We must remember that we are not powerless, if we care to use our power; but we should use it against the mercenaries and never again against the innocent, the general public or our friends. We should recognize that the public is still a friend, is faced with the same enemy and exactly the same mercenaries whom they hate as do we. They need only appropriate education, a forum and leadership to express their true feelings and drive the rascals out.

Having said all this, it remains that the war is in all likelihood lost or is at best in perspective a small skirmish in general western social collapse. And it is doubtful that it is within our nature to think militantly. Thus it may well be that faceless anonymity and individual scramble is the only path to survival.

And, having said that, there remains our great debt to those who in all sincerity gave the seemingly endless hours struggling to solve this social problem which may have no solution. They patiently bore stupid and uninformed criticism, listened to crackpot ideas and abuse and presumably spent as many hours in soul-searching. They deserve the whole credit and our thanks for those essential items in the Commission Report on which we can all agree, and for starting the move toward fundamental legal reform. □

PRESIDENT'S PAGE


Gary R. Hedges, M.D.

Deadlines being what they are, this is being written on December 1st. Hopefully most of the things which have us in turmoil at the present time will be resolved by the time this reaches print and is being read. But it is difficult to write about things as they may be when you read this, rather than the way they are as it is being written.

It is a busy time as it always is before Christmas. The family is planning a 10-day retreat together in the Village of Tenakee over the Christmas vacation and anticipating the pleasantness of warm fires and baths, combined Christmas tree and deer hunt, and the opportunity to hand-make all the decorations for an unlighted tree. The children are looking forward to caroling up and down the single village street. What with the limitations on the salmon fishing season and moose hunting season our freezer and food locker are not overflowing but there is a good supply of salmon (frozen, canned and smoked), halibut, goose, duck and dolly varden and this should be augmented by the Christmas venison. We have at least a three-year supply of firewood stacked and aging. It should really be a very pleasant contemplative period.

In the background and continually intruding upon this scene are a myriad noxious stimuli; patients requesting letters authorizing travel that was never suggested, or approving sick leave that was never attended; an angry letter from an elderly female decrying the fact that I experimented on her and telling me to be thankful that she is not suing me; letters, phone calls and memos from Medicare demanding I discharge a patient that has no place to go because she has had the misfortune of having a series of medical problems without having the courage to wait a decent interval between episodes; the steadily mounting hospital charges which always engender a public debate upon how much service should be available at the hospital. Over and above all these stimuli, the recurrent and basic "Malpractice Problem" continues to squeak its ungreased wheel. Here in Juneau we continue to lose physicians. We were sixteen. We are now thirteen. By May we will be ten or eleven. We continue to lose coverage, now only three of us have insurance and no one has adequate insurance, even in our own estimate of two years ago, let alone in this era of multimillion-dollar suits. Realistically none of us will have insurance by mid-legislative session. People are continuing to implore me to provide care for which I feel totally inadequate, such as delivering babies, caring for the mentally ill, treating sick children, caring for cardiac and diabetic patients.

Hopefully in these troubled times those of us practicing medicine in Alaska will be able to carry on in the best traditions of our profession and provide for our patients to the best of our ability and knowledge, while society grapples and gropes to find a solution to the "Malpractice Problem." Having been an observer and a participant in our state's Malpractice Commission's deliberations on the subject, having watched our state legislature in action in the past, knowing the impotence of much larger and better-funded groups such as the American College of Surgeons, seeing the collapse of the heroic efforts in other states, such as Indiana, learning of the failure of well-thought-out and earnestly followed plans such as New Mexico's, I can honestly see no immediate and complete solution to our state's problem. There is no question in my mind, however, that the avariciousness of a certain breed of lawyers has killed the goose that laid the golden egg for them. Society must define the types of iatrogenic injuries that are compensable, determine a just compensation and find a way to finance it that is fair.

May our profession help society in that effort and not become another snarling voice in the mob. May we not succumb to using our patients' welfare as a pawn in a political, economic or legal game as others would.

If my nonsurgical colleagues will forgive me I will quote a passage attributed to Samuel Mixler that I noted during a middle of the night brush with Bailey's Emergency Surgery.

> "A true surgeon is never fearless. He fears for his patients, he fears for his shortcomings, his own mistakes, but he never fears for himself or his professional reputation."

May I — may we measure up and may our fear of patients not predominate. ☐

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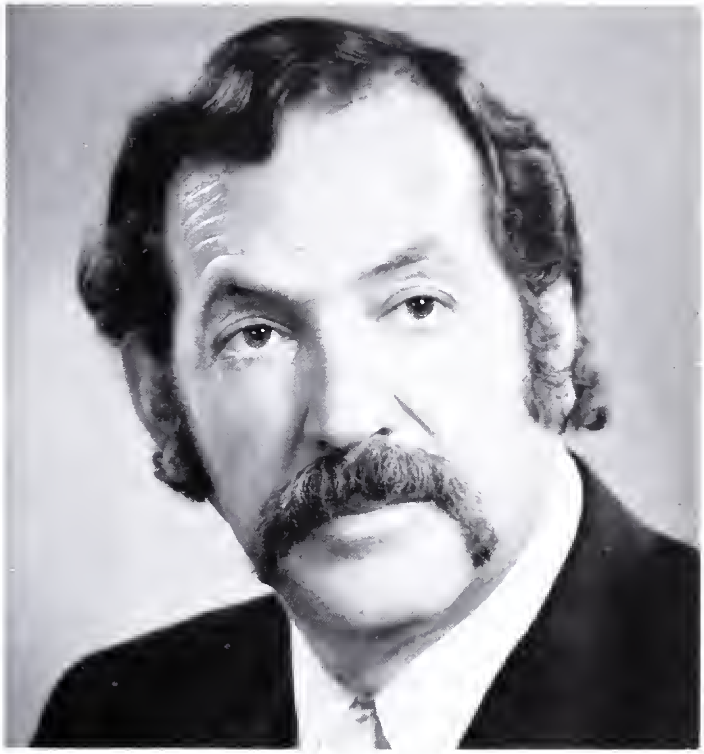
COMMISSIONER'S PAGE

Francis S. L. Williamson
Commissioner
Department of Health and Social Services

Society's attitude toward mental health services has changed from that of whispered need to recognition of those services as legitimate, helpful means for assisting people trying to cope with the multiple stresses and strains of daily life. Although we still see discrimination and neglect, there has been a general growth of acceptance of the mentally ill and the developmentally disabled and their needs.

Significant advances in the understanding and treatment of people affected by mental illness and developmental disabilities have enabled many afflicted persons to remain in their home communities. The use of anti-psychotic medications for the mentally ill now helps restore a casualty to mental stability in a matter of days; in past years it would have taken weeks or months. The use of behavior modification to instill appropriate personal habits, and vocational rehabilitation to teach job skills have assisted many developmentally disabled persons to achieve greater independence. The support of mental health programs through Medicaid and Medicare has broadened the base of funding for all mental health and developmental disabilities programs. Through successful litigation, the patients' rights movement has insured that persons will receive a fair commitment hearing, and will not be indefinitely hospitalized without adequate treatment. All these new directions have combined to bring about the decentralization of residential facilities and an expansion of community-based services for the mentally ill and developmentally disabled.

The impact of these forces is just beginning to be felt in Alaska. The past two years have seen the adoption of a Community Mental Health Enabling Act — the first major change in Alaska's Mental Health Statutes since statehood. The new law is leading to an expansion of Community Mental Health services throughout the state. The Division of Mental Health is currently cooperating with the following communities to establish community mental health programs under the Enabling Act: Anchorage, Barrow, Bethel, Haines, Homer, Juneau, Kotzebue, Nome, Seward, Sitka, and Tanana. These new programs will join those in Kodiak and Ketchikan, which have been operating successfully for the past seven years. Services under these new programs are being provided in areas of sufficient need that do not, at the present time, have functional mental health maintenance and treatment facilities.



Francis S. L. Williamson

Community mental health services offer the possibility of early interventions, effective treatment, and, because of the increase in local control, increased efficiency of operation and acceptance of services by the people.

Alaska Psychiatric Institute has not been without its problems during the past year, but in spite of dramatic increases in admissions, the Institute has shown marked improvement in the quality of care. API is a full-care facility, and has increased its programs offered to the public through increases in psychiatric services by employing full-time psychiatrists and by contracting with the private sector. New capital improvement funds have been provided for a unit for treating mentally disordered offenders. Shifts in the API program during the current year will result in an emphasis of services at the Institute on the mentally ill. Even though the long-term residential care programs for the developmentally disabled are being phased out, API will continue to care for the developmentally disabled when special care is needed that can best be provided by a psychiatric institute. The commitment of this Department and concerned groups throughout the state is to continue to improve services.

In recognition of the unique nature of services required for the developmentally disabled, the Division of Mental Health became the Division of Mental Health and Developmental Disabilities. A position of program administrator specifically overseeing the division's programs for the developmentally disabled was established and a superintendent was appointed at Harborview Memorial Hospital in Valdez. Steps have been taken to comply with national standards enabling Harborview to be certified as a specialized facility for the developmentally disabled. An additional Medicaid option was adopted to enable this program to receive almost 100 percent of its required funding through the state's Medicaid program. An improved working relationship with the Developmental Disabilities Council has led to major planning and program development efforts to improve services to Alaska's developmentally disabled citizens.

Until 1975, Alaska's mental health delivery system emphasized institutional services at the expense of community-based programs. Several critical problems arise from this method of care delivery:

- Across the state there is a wide variability in the availability and comprehensiveness of mental health services.
- The state retains complete financial responsibility for funding these programs.
- Lack of consistent and effective ties between the state hospital and the community inhibit successful care and rehabilitation within an individual's community.
- Aftercare services, particularly to patients from outlying areas, are almost unavailable, resulting in high recurrence rates.
- There are few alternatives to high-cost hospitalization, such as day-care and night-care services within the community itself.
- There are few programs to assist children in dealing with community-oriented stress.
- There are few diagnostic and treatment services for the developmentally disabled citizens of Alaska outside of the Anchorage area.
- There is little citizen involvement in the planning and administration of community mental health services.

The Department advocates a pluralistic approach to mental health service delivery, and harbors the hope that the public and private sectors can work in partnership to improve the availability of mental health services to all Alaskans. The development of the community mental health programs will have the overall effect of attracting more psychiatrists to the state's rural areas, as well as placing an increased demand on our Alaskan psychiatrists as consultants and teachers. Community mental health services will also help to alleviate many of the problems outlined in the paragraph above.

The mental health constituency in Alaska has not, in the past, been well-organized. Citizens, Native organizations, state and local agencies, and mental health professionals can work in concert to develop the beginnings established through several years of effort. As a state human resources agency, the Department is not in conflict with the private sector, but rather, it solicits partnership through active participation in the advisory process so essential to realistic, appropriate planning. □

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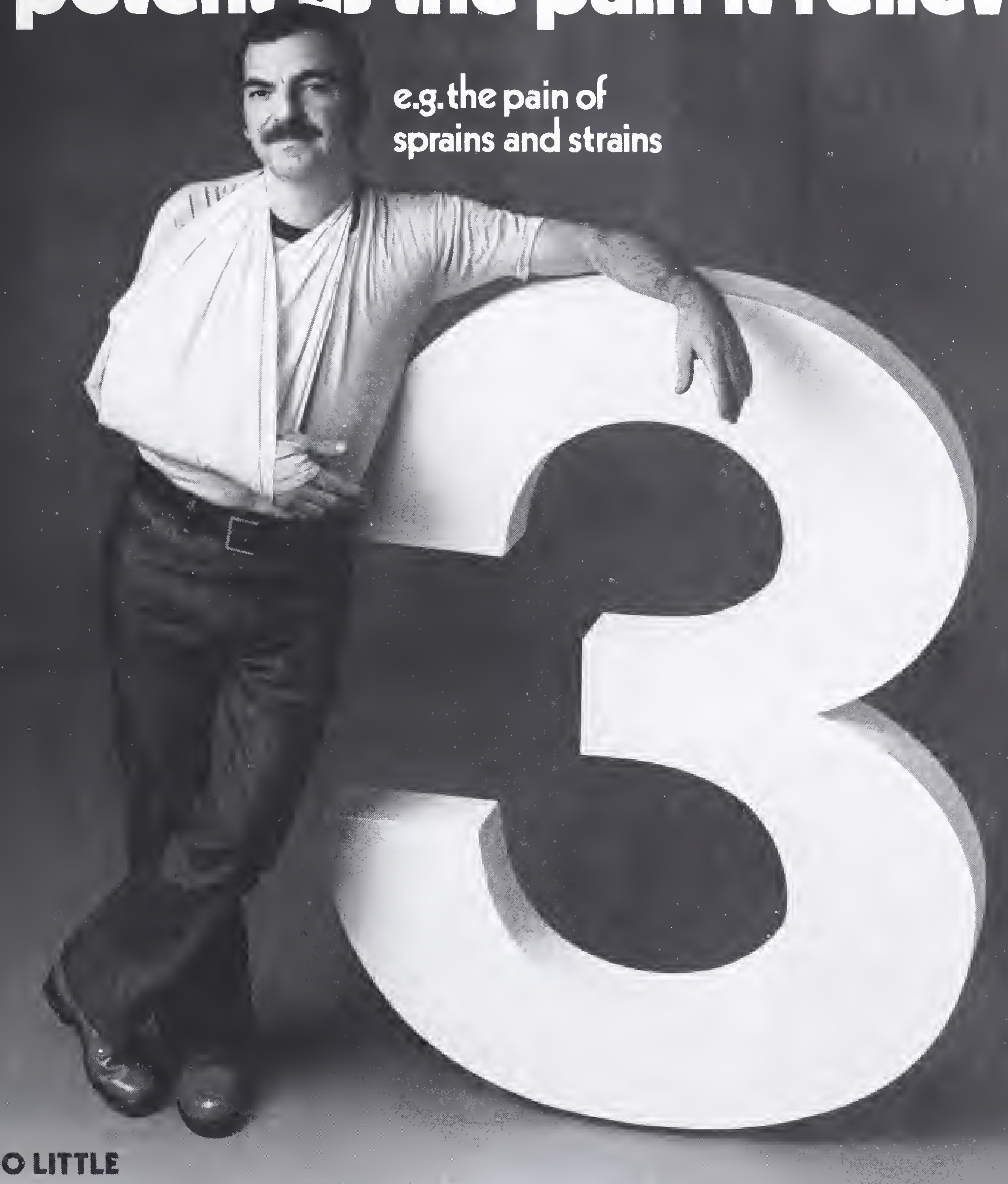

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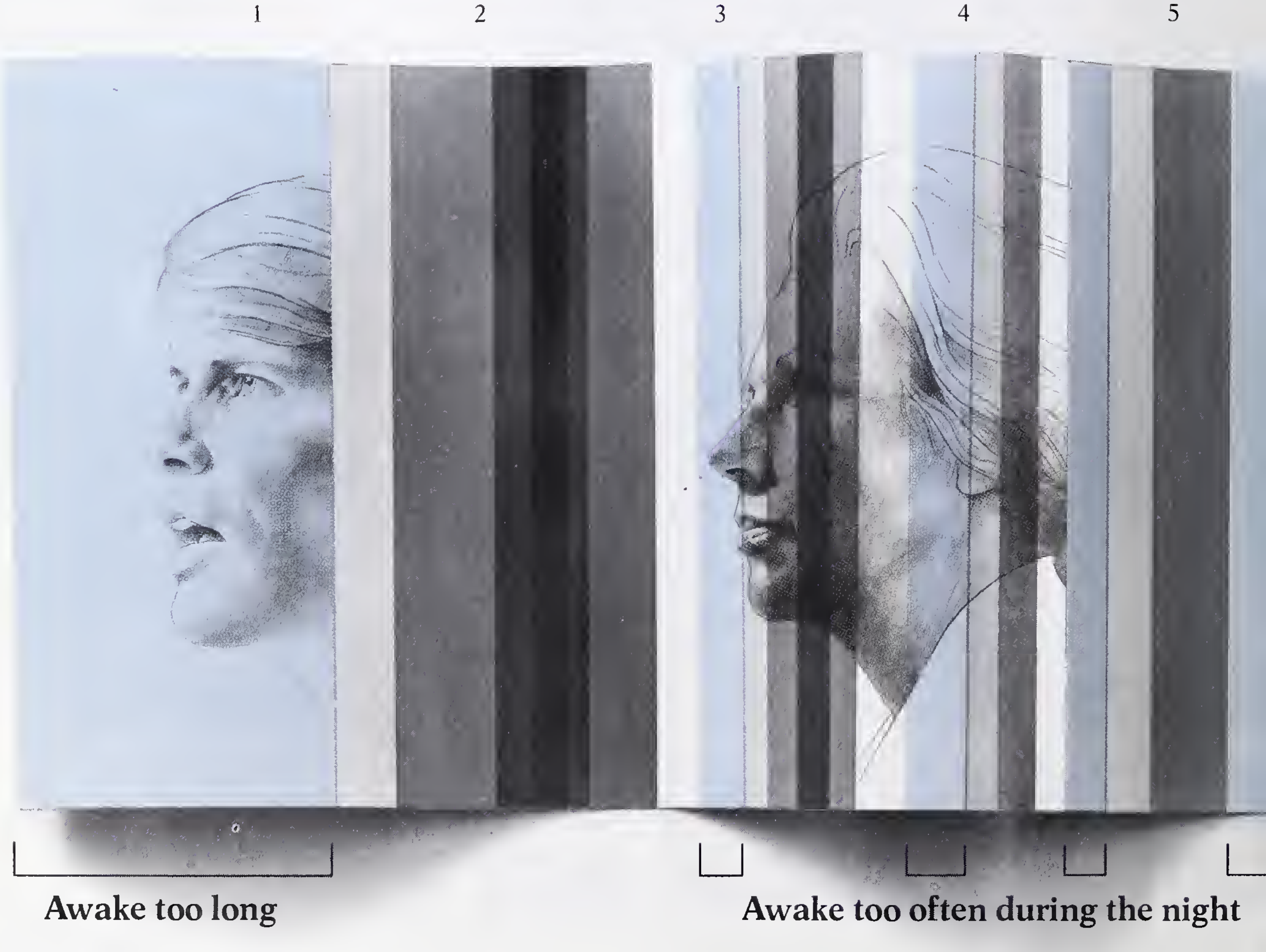
As you can see, this hypothetical "patient" takes well over an hour to fall asleep, awakens several times during the middle of the night and awakens too early in the morning.

Sleep Stages

🟦	Awake	▒	Stage 2
☐	REM	▓	Stage 3
░	Stage 1	█	Stage 4



Awake too long

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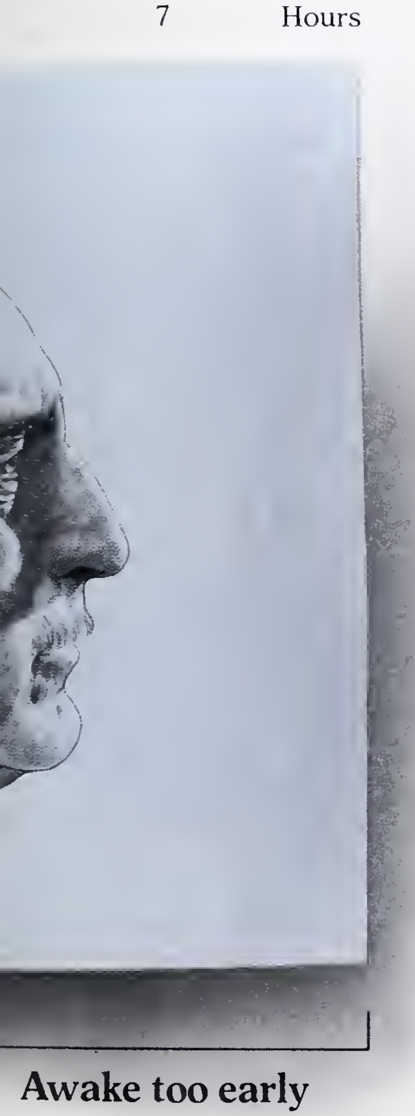

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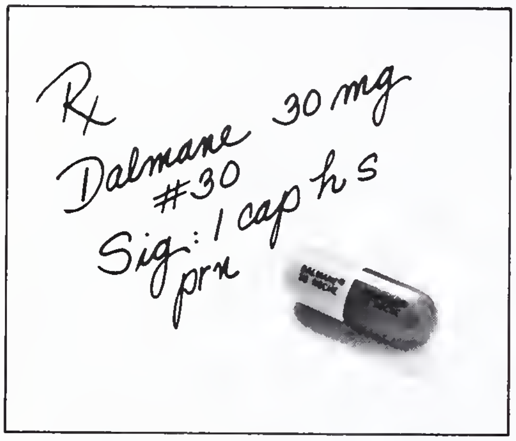

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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

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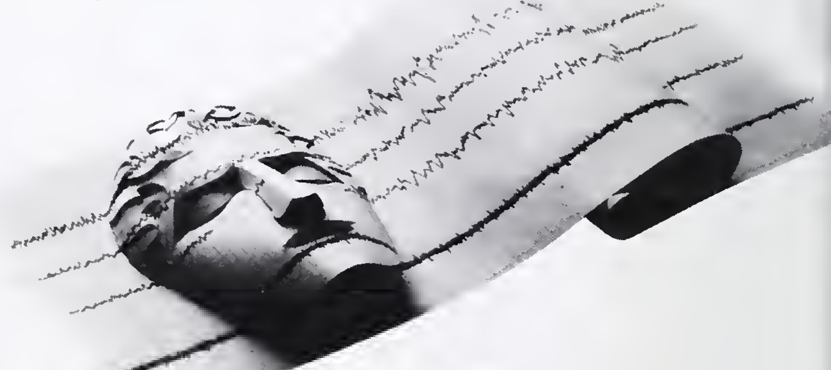
3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ



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NORTHERN HIGHLIGHTS — 22

SELECTED ABSTRACTS ON MEDICINE AND PUBLIC HEALTH IN THE NORTH
BROAD PERSPECTIVES ON HEALTH IN THE NORTH

Linderholm, H.

Arctic medicine in the Nordic countries. Aspects of the scope of Arctic medicine and some current research problems. *Med. J. Australia* (Supplement) pp. 8-13, Feb. 9, 1974.

This article reviews the present state of knowledge and research on Arctic medicine in the Nordic countries, namely Norway, Sweden, Finland, Denmark, Iceland, and Greenland. The author is a professor at the University of Umea, Sweden.

The Nordic Council for Arctic Medical Research was created in 1969, based at Oulu, Finland, for coordinating research in Arctic medicine in the Nordic countries. The activities of this group have included an inventory of current research and the sponsorship of the 2nd Circumpolar Health Conference in 1971.

Arctic medicine is defined by the Council as that concerned with "man's physiological and pathological reactions under arctic climatological conditions, the epidemiology of diseases related to the arctic environment, the performance capacity of man in the arctic milieu, arctic public health problems and the development of protective measures facilitating survival and performance in an arctic environment."

The remainder of the paper describes briefly several major areas of research on arctic medicine now under study in Scandinavia. The effects of arctic and subarctic environments on man is one area of special interest. Man as a biological organism is poorly adapted to cold, but as a cultural being he is much more effective, by his use of clothing, housing and other artifacts. Physiological responses to cold, man's working capacity in cold environments, and the problems of frostbite are all under study. The effects of extended light and darkness on circadian rhythms and seasonal changes, particularly as they relate to mental disorders, is another area of research interest. Isolation and contacts with animals expose arctic peoples to unusual hazards from infectious diseases. Joint diseases are especially common.

The subject of biological qualification for adaptation to arctic conditions is attracting considerable interest. Much of this work is involved with tracing the origins of isolated groups through blood and tissue typing and through anthropometric measurements. The study of some diseases in the arctic, for example, diabetes, may have important implications for the elucidation of this disease for people in more temperate climates.

A final major area of study is community planning for health facilities and programs in the arctic. Housing, sewage, and water systems, communications and transportation facilities, and the training and recruitment of health workers are all of significance in this regard, as are changes in disease patterns, personal habits, diet and other factors bearing on health.

The author concludes by listing four important goals for arctic medical research:

"1. Study of man's adaptation to arctic conditions.
2. Study of the special features of disease and health care in arctic areas.
3. Study of genetic problems among ethnic minorities in arctic areas where isolation is rapidly being broken.
4. Problems associated with changes in population distribution and changes in social structure (urbanization) in arctic and subarctic areas."

Thomas, G.

The Grenfell Mission . . . past, present and future. *Among the Deep Sea Fishers 72*(3): 1-7, 1975.

This paper is a personal account of the medical work of the International Grenfell Association in northern Newfoundland and Labrador. The author has directed this unique system of health care and social services since the 1940's.

The founder, Dr. (later Sir) Wilfred Grenfell, first came to Labrador in 1892 and over the next few decades established a number of small hospitals to serve the indigent fishermen along the coast. The international Grenfell Association was established in 1914 and then operated 4 small hospitals, a hospital ship and other activities on a budget of about $67,000. The IGA program now, in contrast, is budgeted at something over $7 million.

The first central facility for the program was opened at St. Anthony, Nfld. in 1927. The Charles S. Curtis Memorial Hospital, an ultra-modern referral hospital, was opened in 1968 at the same site.

The Mission today continues to serve the people of the small isolated "outposts" along the Newfoundland and Labrador coasts, as well as the Indians and Eskimos of Labrador. Because of the isolation of these communities, congenital abnormalities are common. In days past severe epidemics of infectious disease, as well as tuberculosis and malnutrition, caused a fearful mortality, but these problems are now largely under control. Accidents and injury are still major causes of death and disability.

The article describes briefly the way of life of the Newfoundlanders, both in earlier days and how their traditional ways are rapidly changing.

The medical work of the Mission has also changed substantially, with the growth of health insurance, government subsidies, and the changing patterns of disease. The staff is now much more heavily involved in preventive services and public health than formerly. Teaching has also become an important function, with the hospital at St. Anthony serving as a major training center for the medical school at St. John's, Newfoundland. It has also participated in the development of a School of Outpost Nursing with Dalhousie University in Halifax.

The outlook for the Mission seems excellent. Although deriving most of its operating income now from provincial and federal sources, the Mission continues to enjoy the confidence of both the Newfoundland Government and the people whom the program has served for over 80 years.

Fortuine, R.

Health Care and the Alaska Native — some historical perspectives. *Polar Notes XIV*, pp. 1-42, 1975.

This long paper is an historical summary of the development of health services for Alaska Natives, beginning in Russian times and extending through the U. S. Bureau of Education, Alaska Native Service, and finally the present Indian Health Service. The author is Director of the Alaska Native Medical Center in Anchorage and originally presented the paper at a meeting of the Oklahoma Public Health Association in April 1975.

The Alaska Natives have always borne a heavy burden of disease since the earliest European accounts of their history. In pre-European days health conditions were probably somewhat better, but existence was often marginal because of the uncertainty of the food supply. Chronic diseases, disabilities due to injuries, mental disorders, birth defects, zoonoses, and other infectious diseases undoubtedly occurred widely in this period and were treated by indigenous healers such as shamans.

With the arrival of the Russians and other Europeans, many new epidemic diseases were introduced, with sometimes terrible consequences for the Natives. Later, as cultural changes occurred, new types of disease resulted, such as dental caries and heart disorders.

The two factors which caused a reversal of the headlong plunge toward extinction of the Natives due to disease, especially tuberculosis, were new advances in medical science, notably isoniazid and penicillin, and the development of a system of health care.

Following some abortive attempts at health care for the Natives under the Russian administration, the U. S. did virtually nothing until about 1900, when the Bureau of Education realized that their efforts in education were doomed to failure without attention to health needs.

As a result the Bureau began employing physicians and nurses and building hospitals for Native care. Between 1910 and 1931, the Bureau had hospitals at Kanakanak, Akiak, Nulato, Kotzebue, Juneau, Noorvik, Unalaska, and Tanana. In 1931 the Bureau of Indian Affairs assumed jurisdiction over the health program and later constructed hospitals at Mt. Village, Unalaska, Bethel, Kanakanak, Tanana, Barrow, Mt. Edgecumbe, and Anchorage. Greatest emphasis was placed on tuberculosis control, especially in cooperation with the Territorial Health Department, shortly after the Second World War. The Indian Health Service, part of the Department of Health, Education, and Welfare, took over the program in 1955 and expanded the program greatly, especially in areas of prevention, environmental health, and ambulatory care.

The paper then describes briefly the current program, with emphasis on the increasing involvement of the Native people themselves as employees, board members, and as developers and managers of their own health programs on a local or regional basis. Looking ahead, the Native people will ultimately become even more directly involved in their own health affairs under the authorities of the new Indian Self-Determination Act. Some of the anticipated problems are discussed.

Bendiner, E.

Disastrous trade-off: Eskimo health for White 'civilization.' *Hospital Practice* 156 ff., October 1974.

This is an article in the journalistic style about the sometimes disastrous effects of the white influence on the Canadian Eskimos of the Eastern Arctic. The paper is replete with anecdotal evidence in support of its rather pessimistic conclusions.

The settings for the discussion are the communities of Frobisher Bay, Pangnirtung, Pond Inlet, and Broughton Island, all of which are on Baffin Island. The author states at the outset that "an entire people is being smothered and may soon be extinguished by disease and corruption." He quotes those in the Northern Health Service as feeling that the "process of doom is both inevitable and swift."

Much of the problem is related to the sudden impact of white influence as a result of World War II, the search for oil and minerals, and the general "opening" of the north. New diseases were brought in, new items of diet, a wage economy, consumer goods, and a totally new set of values. Along with these changes came tuberculosis, venereal disease, alcoholism, otitis media, dental caries, myopia, and mential disorders, especially suicidal depression.

The article quotes from various interviews with government workers, professionals and Eskimo people about the causes and effects of the changed way of life. Most appraisals are pessimistic and not a few seem oversimplified.

Much attention is given to the health services which are now available to the Eskimos to deal with the serious health problems which have been engendered. It is stated that there is no shortage of money from the Federal Government, but that personnel are difficult to recruit for the isolated stations, especially from Canada itself. In fact, the government spends 6½ times as much per capita for health services on the Eskimo than it does on other citizens.

The system of health care includes a central facility at Frobisher, with 7 physicians, to serve an area with 6,000 Eskimos. Outlying communities are served by resident nurses in generally well-equipped clinics. These nurses, who are usually trained in midwifery, have access to the doctor's advice through a radio-telephone system. Medical evacuations are carried out when necessary by emergency aircraft charter.

The paper describes in some detail the devastating effects of alcoholism in northern communities. Tuberculosis rates are still 12 times those of other Canadians. Mental health problems are unusually severe in communities such as Frobisher Bay, where the traditional life has most altered.

Notably lacking in the paper is any evidence that the Eskimo people themselves are involved in a self-help program in health in the Eastern Arctic.

—*Robert Fortuine, M.D.*

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
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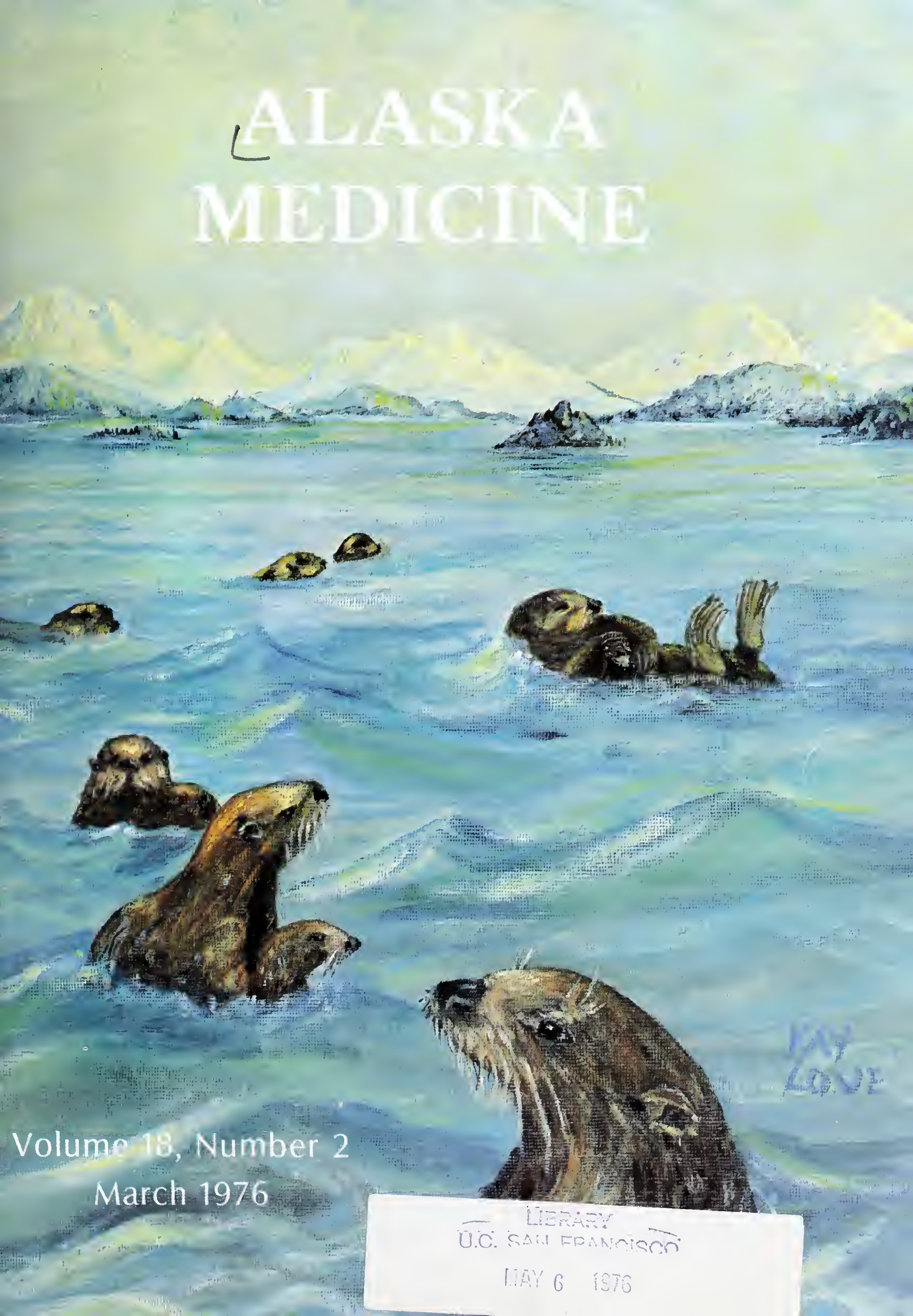

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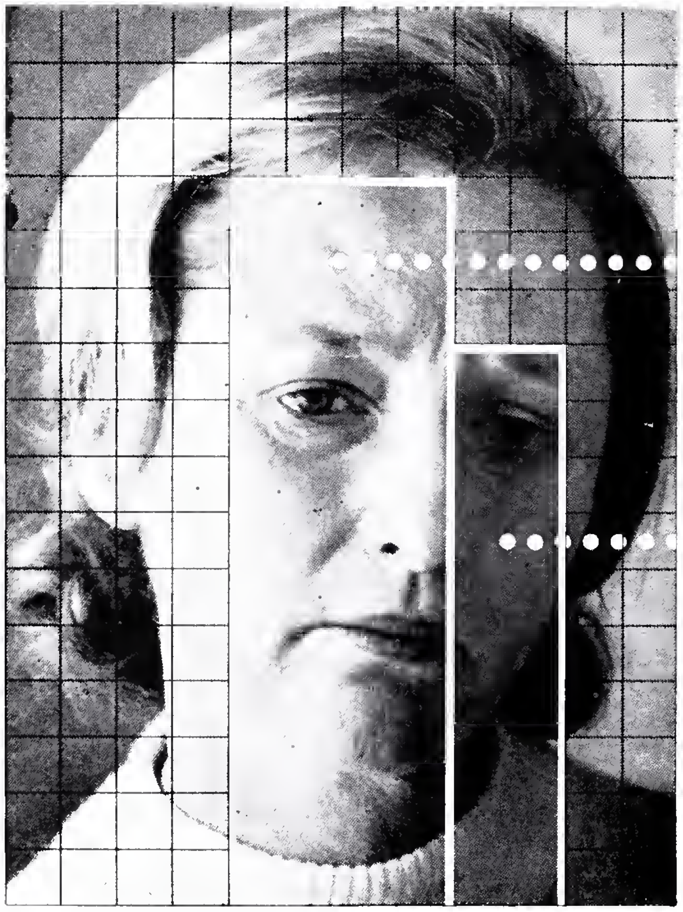

- Predominant psychoneurotic anxiety
- Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in fre and/or severity of grand mal seizur require increased dosage of standa convulsant medication; abrupt with may be associated with temporary i crease in frequency and/or severity seizures. Advise against simultaneo gestion of alcohol and other CNS de sants. Withdrawal symptoms (simil those with barbiturates and alcohol occurred following abrupt disconti (convulsions, tremor, abdominal ar cle cramps, vomiting and sweating) addiction-prone individuals under c

respond to one

According to her major
mptoms, she is a psychoneu-
tic patient with severe
xiety. But according to the
scription she gives of her
lings, part of the problem
y sound like depression.
is is because her problem,
hough primarily one of ex-
ssive anxiety, is often accom-
nied by depressive symptom-
logy. Valium (diazepam)
provide relief for both—as
excessive anxiety is re-
ved, the depressive symp-
ns associated with it are also
en relieved.
There are other advan-
es in using Valium for the
nagement of psychoneu-
ic anxiety with secondary
pressive symptoms: the
chotherapeutic effect of
lium is pronounced and
id. This means that im-
vement is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

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(diazepam) Ⓘⓥ
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in psychoneurotic
anxiety states
with associated
depressive symptoms

rveillance because of their predisposi-
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aring age, weigh potential benefit
ainst possible hazard.
ecautions: If combined with other psy-
otropics or anticonvulsants, consider
refully pharmacology of agents em-
yed; drugs such as phenothiazines,
rcotics, barbiturates, MAO inhibitors
d other antidepressants may potentiate
action. Usual precautions indicated in
tients severely depressed, or with latent
pression, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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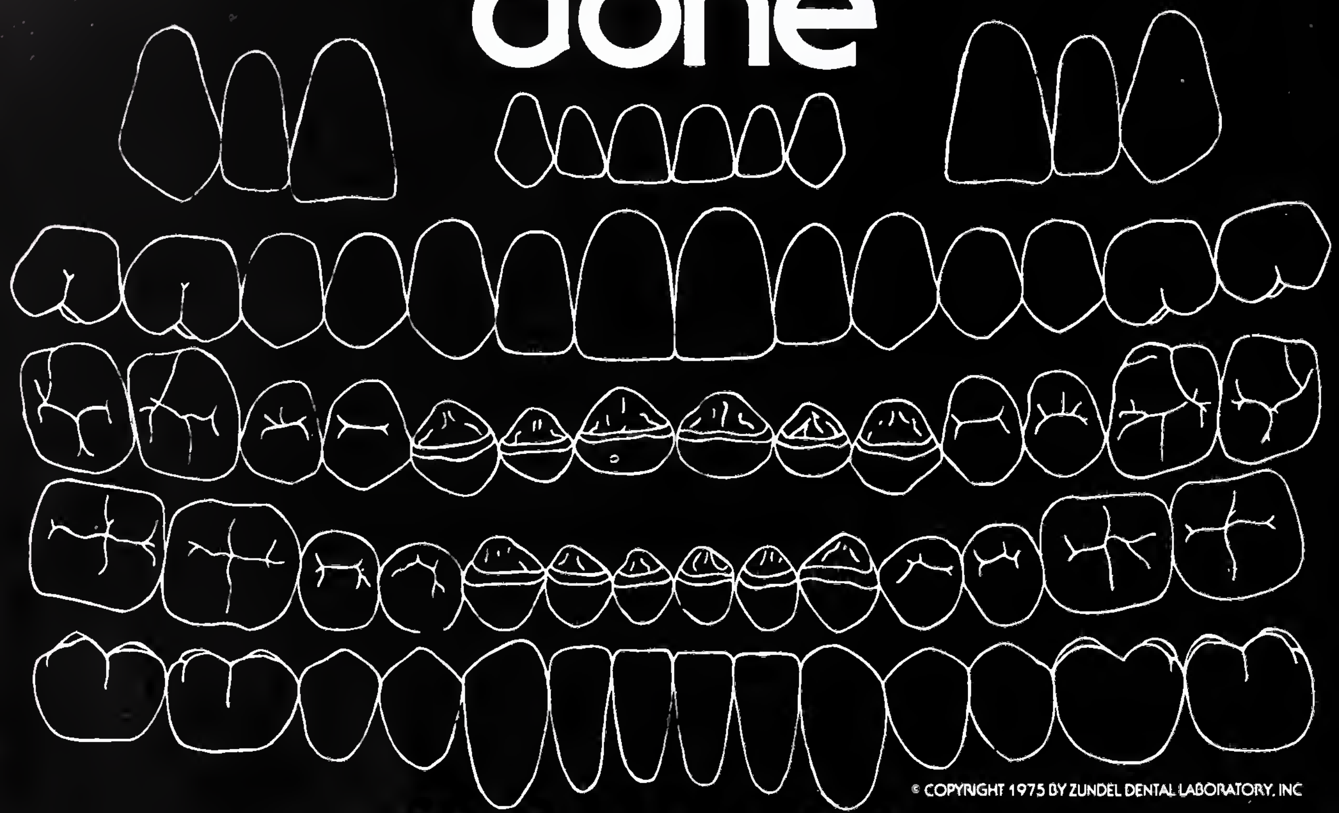

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ALASKA MEDICINE

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Cover: *"The Playful Sea Otter"*
Artist: *Kay Riddell Love*

About the artist—

Kay is illustrator for the U. S. Public Health Service, Alaska Area Native Health Service. She obtained her art education at the Burnley School in Seattle, the Art Students' League of New York, the Anchorage Community College, and the University of Alaska at Anchorage. Kay has lived in Alaska for nineteen years – three years of which she spent homesteading in the beautiful South Fork valley of the Eagle River; she has also staked a recreational site on a lake in the Yenlo Hills area. Kay makes her home near Palmer in the Matanuska Valley where, she says, she has one of the most magnificent views in the State. Mrs. Love has a son and a daughter and two small grandchildren – all "Alaskans."

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EUSTACHIAN TUBE MALFUNCTION IN SOUTHEAST ALASKA

Lee A. Harker, M.D.

Richard S. Van Wagoner, M.S.

Ear disease has long been recognized as a significant cause of morbidity in Alaska, and many studies have documented the incidence of acute and chronic suppurative otitis media, studied their epidemiology, and discussed various aspects of treatment.[1,2,3,4] Little or no attention, however, has been directed to the involvement of eustachian tube function and middle ear effusions in the overall picture of Alaskan ear disease. The present study was undertaken to determine the incidence of eustachian tube malfunction and middle ear effusion in a typical Southeast Alaskan elementary school.

MATERIALS AND METHODS

The total population of the school (109 students) participated in this study, thus insuring an unselected study population. Fifty-five of the students were male and 54 were female. Eighty percent of the students were Alaska Natives (primarily Tlingit Indians) and the other 20 percent were predominantly Caucasian. The children ranged in age from five to 11 years and attended grades kindergarten through four. The age distribution of the students is given in Table I.

TABLE I

Age Distribution

Age in Years		Number
5		12
6		20
7		18
8		18
9		25
10		14
11		2
	Total	109

Three separate initial examinations were accomplished on each child during the same day. In one examination, an otolaryngologist performed an otoscopic examination. In another, a certified audiologist accomplished a pure tone threshold test in a quiet, but not acoustically treated, atmosphere using a Maico 2A portable audiometer calibrated re ANSI. Bone conduction thresholds were determined if any air conduction threshold was greater than 15 dB. In the third evaluation the electro-acoustic impedance measurements were accomplished using a Madsen ZO-72 electro-acoustic impedance meter utilizing a screening technique previously described.[5]

After the otoscopic examination, all children who had physical findings suggestive of eusta-

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chian tube malfunction with or without effusion (tympanic membrane retraction, color change, air fluid levels, or poor mobility) were seen at monthly intervals. Children who, on pure tone audiometry, exhibited a hearing loss greater than 25 dB at any frequency were also seen monthly. Those whose tympanograms showed maximum negative compliance greater than -100 mm of water (Jerger type C), or showed a flat pressure-compliance function (Jerger type B) were also seen monthly. Children with tympanic membrane perforations or sensori-neural losses were excluded from the study.

During the monthly follow-up visits, all three examinations were repeated and a more complete medical evaluation undertaken. Appropriate therapy was determined after this second examination. Medications were not utilized except in a few instances when an acute process such as an upper respiratory infection was responsible for the abnormal findings. No facilities were available for testing inhalant or ingested allergens and an adenoidectomy was not employed during this short study period. Treatment was confined to myringotomy, usually accompanied by transmyringeal ventilating tube placement. Myringotomy was undertaken either when repeat examinations showed persistence of the clinical impression of middle ear fluid, or when persistent tympanic membrane retraction was accompanied by localized or diffuse thinning and atrophy of the tympanic membrane. Myringotomy was also performed when tympanometry was persistently or progressively abnormal.

RESULTS

INITIAL EVALUATION

More than half of the tympanic membranes had some abnormality and many had more than one. These abnormalities are listed in Table II.

TABLE II

Initial Otoscopic Exam

	No. Ears		% of Total
Normal TM	83		38
Abnormal TM	129		59
Perforation		5	
Resolving acute infection		1	
Indwelling ventilating tube		7	
Retraction		112	
Thinning		55	
Tympanosclerosis		12	
Could not observe	6		

Previous surveys have documented a similar high percentage of abnormal tympanic membranes in Alaska Natives.[6,7] In the past, the incidence of perforation and cholesteatoma was higher than in this study. This reduction probably reflects an increase in quality and availability of otologic care as well as an increased awareness of the importance of preventive health measures. The predominant tympanic membrane abnormalities in this study were retraction, local or diffuse thinning, and tympanosclerotic scarring. On the basis of the initial physical examination, a middle ear effusion was felt to be present in 13.8% of the ears which were adequately examined.

Despite the high incidence of tympanic membrane abnormalities, hearing thresholds were from 0 to 25 dB ANSI at all frequencies tested in nearly 90% of the children (Table III).

TABLE III

Initial Audiogram

Finding	No. Ears	% of Total
Thresholds 0-25 dB ANSI	191	88
Thresholds 25 dB ANSI	27	12
Conductive	23	10
Sensori-neural	4	2

The majority of the remaining students had conductive hearing losses reflecting the prevalence of middle ear disease in Alaska.

On the initial impedance tests, tympanometry showed the tympanic membranes to have maximum compliance in the normal range (0 to -100 mm water) in 62% of the children; maximum compliance between -100 and -400 mm of water in 28%; and no appreciable compliance in 10%. Of the last group of children, half (11) had indwelling ventilating tubes or perforations, and the other half were presumed to have effusions in the middle ear space (Table IV).

TABLE IV

Initial Tympanometry Exam

Maximum Compliance	No. Ears	% of Total
0 to -100 mm H_2O	134	62
-100 to -400 mm H_2O	62	28
No compliance	22	10

FOLLOW-UP EVALUATIONS

It was of interest to note the trends exhibited by repeated impedance testing. When the initial examination showed a tympanic membrane compliance in the low negative range (-100 to -200 mm of water), a return to normal was usually seen (9 of 12 ears). This correlated well with improvement in the appearance of the tympanic membrane and especially with improvement in the tympanic membrane mobility. However, when the initial tympanogram was flat, or had optimum compliance at high negative values (-250 mm of water), a return to normal at the next month's visit was unusual (only 4 of 21 ears). It was also of interest that the ears which on initial tympanogram had an abnormal negative peak compliance (Jerger type C) had little chance of having the same peak compliance value on a subsequent exam. Of 32 ears with an initial optimum compliance point between -50 and -400 mm of water, only 8 had a change in peak compliance less than 50 mm of water, and all of those eight had an initial value of -100 or less. The average change, whether increasing or decreasing in negativity in these 32 ears, was 130 mm of water.

MYRINGOTOMIES

Myringotomies were recommended in 17 children for reasons listed previously. In addition to those 17, four others had indwelling ventilating tubes from previous treatment for the same problem. Thus, the total incidence of Alaskan children who exhibited chronic eustachian tube malfunction which had resulted in a middle ear effusion, a persistently retracted and thin tympanic membrane, or a persistent markedly abnormal tympanogram, was 18.4% (Table V).

TABLE V

Treated Cases

	No. Patients	No. Ears
Myringotomy — effusion present	8	12
Myringotomy — effusion absent	4	8
Previous myringotomy with tube	4	7
Myringotomy recommended but not done	5	8
Totals	20*	35
Incidence	18.4%	16.1%

*One child had a prior tube in one ear and developed an effusion in the other.

Of the twenty ears which underwent myringotomy, twelve proved to have a middle ear effusion (eight mucoid and four serous) and eight exhibited no fluid (Table VI). In one ear which did not have an effusion, the acoustic reflex was elicited in response to a 100 dB HTL tone. In the other nineteen ears, the acoustic reflex was not seen at that level of presentation. The average static impedance in the effusion group was over. 4600 acoustin ohms, more than twice that seen in ears without effusion. Flat tympanograms (Jerger type B) were seen in ten of twelve ears in which an effusion was present. In contrast, this was seen in only one of eight ears without an effusion, while the other seven had a negative pressure compliance curve (Jerger type C). The average of the pure tone thresholds in the speech frequencies was 29 dB in the effusion group and 21 dB in the group without effusion.

TABLE VI

Myringotomy Results	Effusion	No Effusion
Number of ears	12	8
Acoustic reflex absent	12/12	7/8
Average static impedance	4680	2300
No compliance	10/12	1/8
Average Max. compliance in mm H_2O	-375 (2 ears)	-200 (7 ears)
Average of APT's	29 dB	21 dB

SUMMARY

The complete population of a Southeast Alaskan elementary school was screened utilizing three procedures: otoscopy, pure tone audiometry, and impedance measurements. Those children found to have abnormalities through any one of these procedures were followed and re-evaluated monthly for three months. On the initial screening, 59% of the ears otoscopically visualized showe some abnormality. Thirty-eight percent of the initial tympanograms were abnormal, but only 10% of the total population had a hearing loss with air conduction thresholds greater than 25 dB ANSI. Follow-up examinations showed good correlation between tympanic membrane compliance as measured by tympanometry and the clinical assessment of tympanic membrane mobility through otoscopy. Ears initially exhibiting a negative pressure-compliance curve tended to be labile, either improving or worsening on subsequent examination, but rarely having the same peak compliance value on retests. The results of a small group of these patients having undergone myringotomies are discussed with the overall incidence of eustachian tube malfunction, as defined in this study and in this time period, being 18.4%.

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SOLO BY STARLIGHT

William C. Compton, M.D.

Last November I flew to Hawaii.

Most people consider that rational unless they find out that I flew my own airplane, which, wild as it may seem, has only one engine. Why take such a ridiculous chance as to fly the Pacific in a single-engine aircraft?

One of my leisure pastimes over the last five years has been to study the feasibility of such a trip. Gradually I became convinced that this flight could be very safe, that it was not a foolhardy venture and that I would enjoy preparing for it and accomplishing it.

For four years, a notebook swelled with information to answer the big questions in four categories: Aircraft, Navigation, Pilot, and Emergency Systems.

Question No. 1: Can any of the available light aircraft make a 2,350-statute-mile nonstop flight with adequate reserve fuel? Well, sure, lots can. Review of operations manuals of a multitude of aircraft soon showed that single-engine airplanes have a great range advantage over twins — they are simply more efficient. Most twins can fly reasonably well on one engine, but overload a twin with the fuel needed for an ocean crossing, and that airplane will gradually descend into the sea if one engine quits. So what is the advantage of two engines, with double the chance of engine failure? Actually, failure of a well-maintained light aircraft engine probably occurs about once in 50,000 hours, so exposure to that risk is negligible on a 15-hour flight. More likely sources of grief over water are poor navigation and fuel exhaustion.

Of the singles, the performance figures were best for the Beechcraft Bonanza. I bought a 1961 model in 1973, replaced the engine, and added tip tanks, a slaved directional gyro, and an emergency alternate generator. In 1974, I obtained a 105-gallon cabin tank from a man who had flown the Atlantic in his Bonanza. (See, there are other nuts like me!) After 450 hours of flying my Bonanza, I knew its capabilities and trusted its engine. Compression was consistently good on all cylinders, serial oil analyses were good, and no added oil was needed between 25-hour changes. A special flight permit was obtained from the F.A.A., allowing takeoff at 10% over normal gross weight for overwater flight. With platinum spark plugs, the engine would drone on and on without protest at the low power settings needed for maximum range. This meant an average of 158 miles on 8.8 gallons every hour, giving over 3,800-statute-mile range with 225 gallons carried. This was the bird for the trip!

Question No. 2: Since there aren't many landmarks in the North Pacific, how do I find Hawaii? Just as importantly, how do I know that my ground speed is adequate to get there before the fuel runs out?

From cover to cover I soaked up a book named, simply, *Air Navigation HO216*, published by the Navy. I learned the science and then the art of using an aircraft bubble sextant for celestial navigation. Once my position fixes were within two miles of my porch, I started taking airborne fixes. They were excellent IF there was no turbulence to bounce the bubble and IF I made no mistakes. And there was always the automatic direction finder (ADF), or radio-compass, which can point the way over tremendous distances in ideal conditions and usually can be counted on for a 300-mile range.

Question No. 3: Am I capable of such a trip in regards to training, endurance, etc.? To generally sharpen my aeronautical knowledge, I studied, practiced, and passed the tests to earn an Air Transport Pilot Certificate in 1972. In 1974, I made a 1,700-mile overland flight in 10:45, and was still functioning OK. As a youngish obstetrician, I had confidence in my ability to work long periods without sleep.

Question No. 4: If things turn sour, is there a way out? Is a landing in the sea survivable? A survey of light aircraft ocean ditchings shows that 87.7% of the occupants of low wing, retractable geared, single-engine aircraft landing in the sea get out with minor or no injury. What about surviving, once out of the airplane and uninjured, when water temperatures are as low as 41°F? A closed cell foam pad was placed in the bottom of an inflatable two-man raft, and a weatherproof radar reflective canopy was installed over the top. A suit of neoprene foam was obtained to wear in the aircraft and a comfortable June swim in Lake Otis convinced me that the hypothermia problem now had an answer.

Maritime survival books were studied, and additional gear included a floating waterproof emergency radio beacon, water desalting apparatus, food, dyemarker, flares, strobe light, fishing gear, etc., etc. The last and biggest item of reassurance was a high-frequency transceiver, with which I could converse with San Francisco, Honolulu, and Anchorage from thousands of miles away.

By the time things had gone this far, I was hooked. July was the best month for the trip. Here it was October and everything was ready. I reasoned that if I waited nine months, some drunk would run his snowmobile into my airplane, or I'd land it gear up, or SOMETHING, so let's go now.

The 3½-hour flight to Cold Bay was made November 20. That afternoon conditions were perfect for the Hawaii flight, with tailwinds, and it looked good for the 21st, so I spent the night, got up early, and found that the weather was now so-so. No tailwinds. Maybe slight headwinds. After the most careful preflight inspection I've ever made, I taxi out and receive my clearance. "390Z is cleared to the Honolulu airport via flight planned route. Maintain eight thousand." Off at 7:19 a.m., climb to 8,000 feet, and Honolulu-here-we-come!

A waning moon is in the western sky and the sextant gives a line of position showing on course after one hour. As expected, a front ahead, an hour and a half in clouds, a little ice, then into the clear again. Three and a half hours but, a sextant sight on the sun yields a position line perpendicular to my course, giving a "speed line," and our ground speed is only 111 mph. YECCH. That's a 40-mph headwind! Another "sun line" an hour later shows a ground speed (what ground?) of 117 mph. Still YECCH. Onward, forever the optimist. Then 2½ hours in more weather, with the sun not visible, no fixes, and a new wind forecast over the radio is unfavorable. So, 7:15 and 870 miles out now, no celestial fix for 2½ hours, lousy groundspeed, worse winds forecast ahead — there's no question about it, to press on is to rely on luck, so it's time to punt. A quick turn around, a call to Anchorage, no more need for stretching fuel, power up from 45% to 65% and tailwinds expected. Soon it's dark. The stars come out. Jupiter and Polaris give a fix, and the radio-compass points to the Cold Bay beacon, now 450 miles to the north. High frequency contact is lost with Anchorage on 8938 kc as the sun goes down, though I hear him calling me. I try San Francisco on 5603 KC, and we converse like he is across the dinner table. He relays my Cold Bay estimates to Anchorage, and I update my progress periodically with sextant shots of Polaris. (The sextant altitude of Polaris, with a small correction, gives latitude.) Landing at Cold Bay at 7:49 p.m., after 12½ hours over the wet, nothing looks good except my oil, down less than one quart. Happiness is dinner drunk while standing.

To my intense relief, the weather is lousy the next a.m. and then the following afternoon, it looks possible. There is a low pressure center south of Cold Bay, giving headwinds on the direct route, but the forecaster says 60-knot tailwinds if I go over to the 170° W meridian, 400 miles west of the direct route, which makes the flight 2,700 statute miles (2,304 nautical). SOLD!!! — but with reservations. Sitting behind me in the cabin is a tank with 630 pounds of 100 octane fuel, strapped down to the airframe with nylon webbing stressed for 6 G's. It takes 13 hours' flying to run that tank dry. While it is full, I am nervous. Long thought out plans are for a morning departure, so that a ditching with a full cabin tank would be with daylight, and good opportunity to evaluate the sea surface and splash down gently without tearing the tank loose. The idea of a night ditching with the cabin tank full lacks any appeal whatsoever. Also, from 50N to 30N latitude, where I expect 60-knot north winds, ships are reporting 35-knot west winds on the surface with high seas, not a hospitable landing site. The problem is resolved by my firm confidence that I have fuel, oil, and engine quality which assure continuous power for 25 to 29 hours, depending on power setting. Good winds aloft and weather allowing celestial navigation are my most important requirements and I lock night ditching thoughts away in the back of my brain.

Off at 2:37 p.m. local, climbing southwest for 50North 170West, where I will turn due south. Level at 10,000 feet, clear skies, smooth air. A speed line on the setting sun, a course line on Jupiter as the sky darkens, and then a three-star fix puts me at 50N-170W after 3:23 elapsed time, and I'm 17 minutes behind on my flight plan. At 4:13 elapsed, I'm at 48N-170W, making 166 mph groundspeed, which is a 10-mph tailwind. An hour later, I'm crossing 43:22N and WOW, 250 mph, 90 mph tailwind!! Another hour later, working my next three-star fix, I discover my mistake on the last one, and I'm just now at 43:30 N, making a ground speed of 175, which means a 20-mph tailwind. Looks like a longer trip than the 15:45 flight planned, but I've plenty of fuel, and at least no headwinds.

A blanket of stars stretches from horizon to horizon, and the view of the heavens is absolutely perfect. I turn off the flashing white anticollision light, for these are not crowded skies. A bright red light suddenly appears on the sea to the east. A ship, I presume, but somehow, the light follows me, and I notice the red color gradually turning to yellow. It is Mars.

On into the night we go. The moon comes up, and between the scattered cumulus clouds I see the endless swells of the ocean. I lose Anchorage on the HF, so call Honolulu and stick with them. An hour later, a Pan Am flight calls me on VHF, why aren't I communicating with Anchorage, the center is worried about me? Apparently Honolulu and Anchorage centers don't talk much. Reassured, PanAm says good luck and good night, and I feel less alone. The star sights are working, ground speed is fair, I correct this way one hour and that way the next according to the stars. The engine sounds good, instruments are steady, and I am overcome with a rosy glow, for I know I will make it this time.

Midnight, 9:23 elapsed time, I'm down to 35N latitude, and turn southeast for Honolulu. I still have over 1,000 miles to go, but having turned southeast for the run in to Honolulu I keep imagining it's just an hour ahead, and I can almost see it. The ADF picks up commercial broadcast stations on Oahu and points dead ahead. I can taste it. It's in the bag.

Meanwhile, the cumulus tops are getting higher, and I weave among them in the full moonlight while climbing to stay on top. But the clouds are climbing too, and at 15,000 feet, they swallow the Bonanza, bounce it, and coat it with ice. Down we go, and at 7,000 feet the air is warm, the ice is gone, but my friends, the stars, are gone too, permanently. That means no celestial fixes, but the radiocompass gives cross-bearings from French Frigate Shoals, a rock with a radiobeacon halfway between Hawaii and Midway Island. At 4 a.m., 13:23 elapsed time, in turbulence and cloud, while running the last few gallons from the cabin tank, the engine is suddenly rough and stays that way. The instruments show the number 5 cylinder is not firing. My greatest fear, a night ditching in the ocean, leaps from a locked closet in my cerebrum. My heart is pounding as I tell Honolulu of the dead cylinder and my estimated position. An increase in power setting and mixture holds the altitude and airspeed but fuel flow has increased an unknown but surely significant amount. Scary, but not too bad if the engine will keep going like this. One hundred fifteen gallons on board, and it looks like four more hours.

Honolulu asks whether we're declaring an emergency and requesting an escort. Negative and negative is the answer. It looks like a piece of sediment from the cabin tank has entered the fuel line and plugged the fuel injection nozzle on number 5 cylinder. This isn't good, but isn't bad like throwing a valve and grinding it up in the engine. My confidence is returning with each minute the engine keeps running.

Am I tired. Exhausted but tense. The coffee is all gone. The wet suit is wet. I am dry. The output jug is full, and the intake jug almost empty. Complacency sets in. I dream of the great outhouse in the sky. Lucky for the autopilot — it holds course flawlessly.

The sky is lightening and the communications are fading with the rising, invisible through solid clouds. The radiocompass gets nothing but static from rain showers all around. Breaking out between showers, it points more or less ahead at some Oahu radio station.

I've had the transponder on, and occasionally the reply light flashes, meaning I'm just out of range of a radar interrogation. Let's try 126.5 mc, on VHF, the Honolulu Center frequency for the northwest sector. The ground stations are not readable, but an aircraft is heard talking to Honolulu Center. I call for a relay and bang! "390Zulu, Coast Guard 438, come up 121.5." I do, and he's a C130 out to escort me in case I ditch. I'm thinking, "Gad, what does a Herc cost per hour?" and saying, "Hey, I did not, repeat NOT, declare an emergency." He knows, it's free, nothing better to do, see you soon.

Never did see him, as he was at 16,000 feet and I at 7,000. He kept bugging me for transmissions to home on me, while I was busy tuning up this and that station through the static on the direction finder. I'm sure he'd have been appreciated infinitely more if I had ditched.

Sudden realization — "That's Land!" — the hills of Oahu dead ahead, between cloud layers. Radar contact with Honolulu Center, "What's your fuel state?" "Seven Hours." Handoff to Honolulu Approach Control. "390 Zulu say your intentions." "ILS runway 4 right circle to land 22 left." — beat him at that game by listening before calling. A conscious effort to prove I'm still sharp and alert, but I'm really not.

Touchdown at Honolulu International 17 hours 49 minutes after departure from Cold Bay, with 53 gallons left in the tanks. I park the airplane, and a line boy walks out to see what this creature in a crazy red wet suit is doing, crawling off the wing and falling on his face.

"Where'd you come in from?"

"Cold Bay."

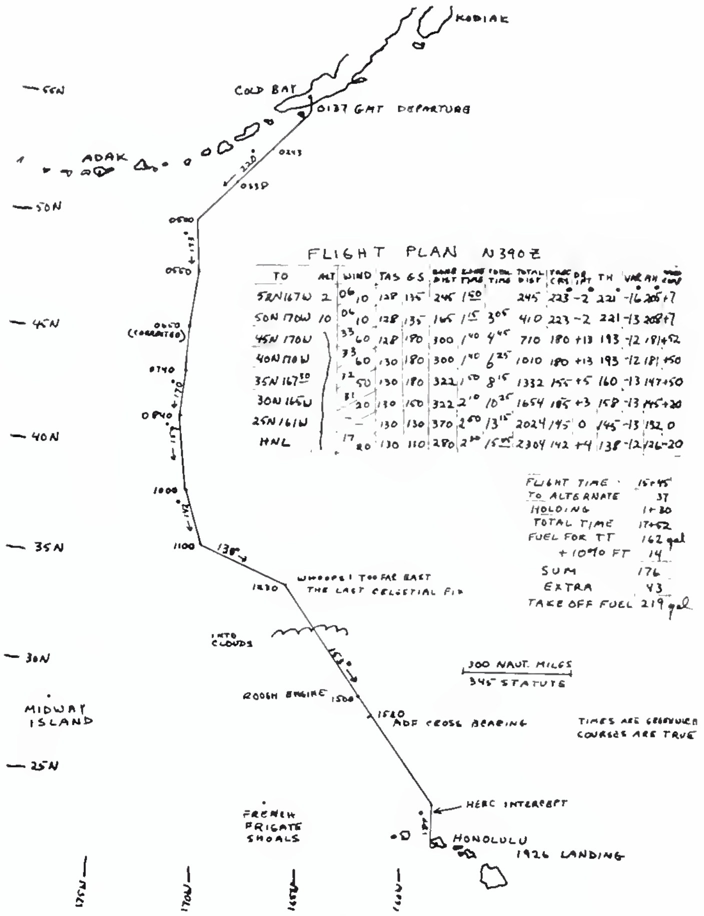
"Which island is that on?" I say no, Cold Bay is in Alaska, and he thinks I'm pulling his leg until he gets downwind of me.

I had always imagined a triumphant step from the airplane into the Hawaiian sunshine a la Neil Armstrong, but it's raining in buckets, I can hardly walk, and I'm just totally wrung out from the tension of the rough engine and the ignominy of having scrambled a Herc.

But now it's different. The trip will stay with me as a brief moment of beauty and grace and triumph, in an eternity of hurried meals and midnight phone calls, and next time I'll chamois my fuel, thank you.

Why did I do it? Adventure. Change of pace. The challenge of doing something difficult in another profession intrigued me. There were jets over that ocean with three pilots, a flight engineer, and a navigator, but any two or maybe one of them could have done the whole thing. But they didn't and I did. If that's an ego trip, let it be. I might lose my medical next year but I won't lose the memories. It will be fun reliving this and other experiences when I'm salted away in an old folks' home.

I must end by saying that this flight is not a first, nor a record, nor really remarkable at all. Aircraft like mine are flown over the oceans daily on similar trips. But for me, it was special.


KODIAK
COLD BAY
0137 GMT DEPARTURE
ADAK
55N
50N
45N
40N
35N
30N
25N
0243
0350
220°
0550
0650 (CORRECTED)
0740
0840
1000
1100
138°
1230
WHOOPS! TOO FAR EAST THE LAST CELESTIAL FIX
INTO CLOUDS
ROUGH ENGINE 1500
1520 ADF CROSS BEARING
MIDWAY ISLAND
FRENCH FRIGATE SHOALS
HERC INTERCEPT
HONOLULU
1926 LANDING
300 NAUT. MILES
345 STATUTE
TIMES ARE GREENWICH
COURSES ARE TRUE
175W
170W
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FLIGHT PLAN N390Z
TO ALT WIND TAS GS
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50N170W 10 06 10 128 135 165 1:15 3:05 410 223 -2 221 -13 208 +7
45N170W 33 60 128 190 300 1:40 4:45 710 180 +13 193 -12 181 +52
40N170W 33 60 130 180 300 1:40 6:25 1010 180 +13 193 -12 181 +50
35N167:30 32 50 130 180 322 1:50 8:15 1332 155 +5 160 -13 147 +50
30N165W 31 20 130 150 322 2:10 10:25 1654 185 +3 158 -13 145 +20
25N161W 130 130 370 2:50 13:15 2024 145 0 145 -13 132 0
HNL 17 20 130 110 280 2:30 15:45 2304 142 +4 138 -12 126 -20
FLIGHT TIME 15+45
TO ALTERNATE 37
HOLDING 1+30
TOTAL TIME 17+52
FUEL FOR TT 162 gal
+10% FT 14
SUM 176
EXTRA 43
TAKE OFF FUEL 219 gal

These are my celestial computations for the trip.

Fix time — is in Greenwich Mean Time, the time at 0° longitude.

LAT and LONG — refer to approximate position at fix time.

GHA — Greenwich Hour Angle of Aries, refers to the degrees of rotation of a reference point in the sky, Aries, from the 0° meridian of longitude, which is at Greenwich, England. GHA for any moment obtained from the Air Almanac.

LHA — Local Hour Angle — relates the sky reference Aries to an assumed position (AP) such as 32N 166°20'W in the 1230 fix, GHA minus assumed longitude LHA, and 166°20' was assumed to make LHA a whole degree.

HC — computed altitude. The angle of a star above the horizon to be expected at fix time at the assumed position.

ZN — Azimuth. The direction of a star from its assumed position. Found in Almanac along with HC.

HS — Altitude Shot. The sextant reading of the altitude of a star.

HO — Observed altitude. HS corrected for refraction, etc.

INT — Intercept. The difference between HC and HO. Every degree of angle difference represents 60 nautical miles, thus every minute of angle is 1 nautical mile.

LOP — Line of Position. Obtained from the ZN and INT for each star by plotting from the assumed position on the chart. For example, the 1230 Pollux LOP lies 64 nautical miles toward Pollux which was to the east, therefore the Pollux LOP is a north-south line plotted 64 miles east of the AP. Two LOP's make an X, which is a fix. Three LOP's make a triangle, which is a better fix.

Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct non-therapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

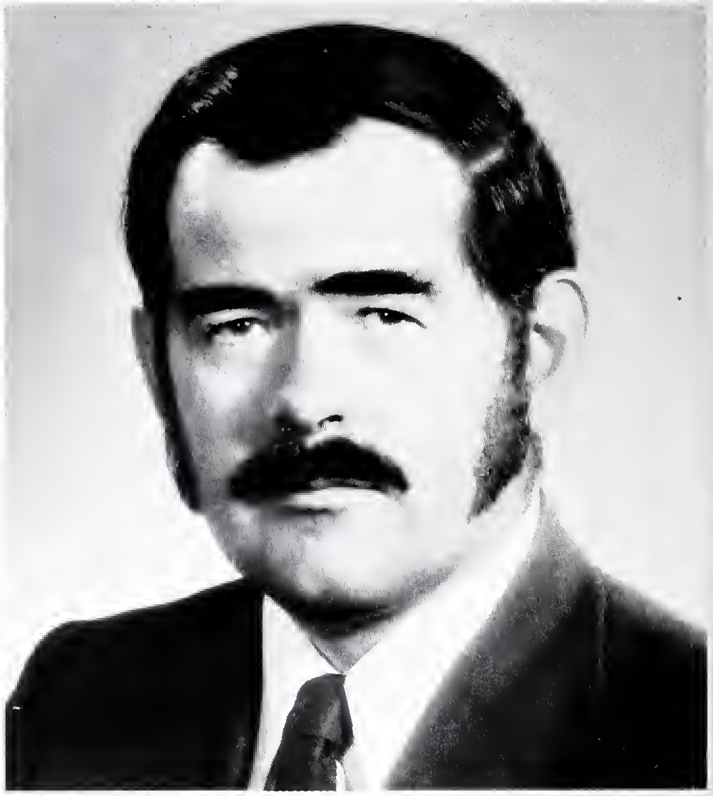
P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005

PRESIDENT'S PAGE

Yesterday I thought I had another suit on my hands. The hospital record room called saying that a record of one of my patients was being subpoenaed. I got my office records on the case out and reviewed them. It was a patient from five years ago who had a bilateral vein stripping and I noted that it was not a perfectly unmarred case since at two weeks she had a small eschar in one of the inguinal incisions and at three months she had a small residual vein noted over the anterior calf of one leg which I offered to inject but which she declined. I am afraid my whole attitude the rest of the day was changed while I wondered what possibly could have induced this patient to sue me. In any regard, my depression was some shade of black as I drove to the hospital. On reviewing the records in the hospital record room, however, I found that this patient had a subsequent admission for the extraction of an interabdominal IUD and, indeed, that is what the people who subpoenaed the records were concerned about. I must confess that my outlook brightened considerably in spite of taking into consideration the condition of my fellow workers in the vineyard who must be involved in the case. Later that evening this outlook that I am confessing to you remained bright, even while perusing the evening paper and noting that a Grand Prix auto driver's widow is suing a tire company and the helmet manufacturer for allowing harm to come to her husband at 160 miles an hour. A spy's widow was suing the government for allowing harm to befall him. A group of Italian Air Force widows were suing Lockheed Aircraft for allowing harm to come to their husbands. The City and Borough of Juneau have generously settled a 1.2 million dollar claim of a youngster struck on the highway after school. Although I am afraid I will have to pay a portion of all of those claims win or lose, in the form of higher tire prices, higher plane fares or higher taxes, it is much easier when your own personal ox is not being gored.

We are now in the eve of the actual floor battle regarding malpractice legislation and in recent conversations and meetings with a great number of physicians across the state representing themselves and others, I find that there is still a remarkable solidarity in the medical profession. I am hopeful there is the realization by now in the legislative area that they have the responsibility for passing legislation that is fair and equitable to the patient and the doctor and that discourages rather than encourages fear in the doctor-patient relationship. I think there has been a realization or is a realization on the part of those of us who do have adequate insurance at reasonable rates, that there is nothing generically to fear about a mandatory system since, if it is workable, they would want to join those of us who are uninsured in such a system. And, if it is unworkable, it will be unworkable for all of us and this would be the best possible lever to make the legislature make additional changes that create a workable system.



Gary R. Hedges, M.D.

According to a news story today, the House Judiciary Committee and the Senate Commerce

Committee have been laboring 44 days on malpractice bills before them and whatever form the legislation finally takes, it will have been developed in the collective wisdom of the legislature but under the continued observation, input and pressure of the Medical Association. If items of reform that we all feel very strongly about and wish to see included in a legislation are not present in the final form, it won't be because of the lack of their introduction, reintroduction and being continually brought to the attention of the legislature during their deliberations. Many members of the profession have contributed generously of their time to do this. The entire medical profession, members of the Association and those not, are deeply indebted to the contributors to the Providence Fund and the many members of the Anchorage Medical Society who have contributed so much of their time to tell our story and present our interest and points of view to a frequently uninterested legislature.

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NORTHERN HIGHLIGHTS — 23

SELECTED ABSTRACTS ON MEDICINE AND PUBLIC HEALTH IN THE NORTH

Genetic, Metabolic and Nutritional Disorders

Scott, E. M.

Genetic disorders in isolated populations. *Arch. Environ. Health 26:* 32-35, 1973.

This paper describes four genetic diseases which have an unusually high prevalence among certain groups of Alaska Natives. The author, now with the Center for Disease Control in Anchorage, was for many years with the Arctic Health Research Center.

Three factors influence the inheritance pattern in isolated populations: the size of the population, the degree of mixing within it, and the customs related to mate selection.

The genetic consequences of these factors in Alaska include substantial homozygosity of the population, genetic drift, "founder" effects, and the non-random appearance of recessive traits. These are illustrated by the patterns of four diseases seen in rural Alaska.

Kuskokwim disease, or congenital arthrogryposis, is a condition characterized by multiple joint contractures and is known only from Alaska. Seventeen cases in seven families were known in 1973. All cases were in Yupik Eskimos and none of the families were known to be related. The disease is an autosomal recessive with a gene frequency of about 4% but the known patients probably represent the first instances of the homozygous condition.

Complete absences of serum cholinesterase is another genetic disease in Alaskan Eskimos, concentrated particularly in the Yukon Delta and Norton Sound regions. The condition has been identified in 51 people from 29 families and is normally benign except when succinylcholine is used in association with an anesthetic. The disease is an autosomal recessive with a gene frequency as high as 15% in some areas.

Hereditary methemoglobinemia is another generally benign enzyme deficiency, causing some degree of cyanosis. Twenty-nine cases from 14 families are known. Six families are Eskimo and the remainder Athabaskan Indians. It is an autosomal recessive with an overall frequency of some 4-7%.

Finally, a congenital salt-losing adrenogenital syndrome has been identified in 15 infants from 12 families in southwestern Alaska. This autosomal recessive gene has at least a 4% frequency. The condition has been described from patients over a wide area, from the Alaska Peninsula to the mouth of the Yukon. The condition may go unrecognized, especially in male infants, and is uniformly fatal if not treated promptly.

Scott, E. M.

Inheritance of two types of deficiency of human serum cholinesterase. *Ann. Human Genet. 37:* 139-143, 1973.

This paper describes the genetic relationships of two types of congenital cholinesterase deficiency found in the Eskimos of Western Alaska. Some 37 individu have been identified with no enzyme activity (Type and another 21 have only 2-4% of normal activity (Ty T). Two explanations are possible:

1. That the two types represent allelic gene defects.
2. That the trace enzyme and the normal enzyme might be products of different genes and that the trace enzyme was polymorphic in the population but masked in all but deficient persons.

Deficiency of cholinesterase was identified in [illegible] families, of which 11 had more than one deficient sibling. In each of these families, all affected children had the same type of deficiency. The probability that such a situation could occur by chance alone was calculated and found to favor the hypothesis that the two types represented allelic defects in cholinesterase.

The "T" type of deficiency has thus far only been described in western Alaskan Eskimos. Both types of deficiency together account for 1.2% of about 4,000 persons in the area.

Clow, C. L.; Laberge, C.; Scriver, C. R.

Neonatal hypertyrosinemia and evidence for deficiency of ascorbic acid in Arctic and subarctic peoples. *Can. Med. Assoc. J. 113:* 624-626, 1975.

This paper describes the apparent relationship between Vitamin C deficiency and hypertyrosinemia in eastern Arctic Eskimo infants. The authors are associated with the McGill University — Montreal Children's Hospital Research Institute and the Centre Hospitalier Universitaire Laval.

It has long been known that a transient hypertyrosinemia may result in newborns from an insufficient intake of ascorbic acid. The condition may easily be corrected by supplemental Vitamin C.

For four years a screening program for tyrosine concentration in whole blood has been carried out in infants born in the eastern Arctic or subarctic regions. Results from two surveys have shown that Inuit infants had an incidence of hypertyrosinemia well above the levels of people from southern Canada. In one period the rate was some 30 times higher than expected, with the Inuit infants showing 14.8/100 newborns affected (tyrosine concentration 0.42 mmol/l.) compared with a rate of 0.5/100 among Anglo-Saxons.

Serum ascorbic acid levels were noted to be low in studies of pregnant women carried out in connection with the Nutrition Canada survey. Many had levels considered to be at high risk for scurvy.

It is stressed by the authors that no correlation is proved by these observations on hypertyrosinemia and ascorbic acid deficiency, since the data were collected by different observers among a different groups of subjects. Serial observations on mother-newborn pairs will be needed to confirm the apparent association.

Although neonatal hypertyrosinemia is generally felt to be benign, there is some valid doubt on this score, particularly in low birth weight infants. Further studies are needed to elucidate this matter.

Beaton, G. H.

Nutritional problems in the Arctic (Editorial). *Can. Med. Assoc. J. 113:* 601-2, 1975.

This editorial comments on the study of Clow *et al*, abstracted immediately above. The author is Professor of Nutrition at the University of Toronto.

After briefly summarizing the findings relating ascorbic acid deficiency and hypertyrosinemia, the editorial goes on to describe other nutritional deficiencies which were uncovered in the recent Nutrition Canada survey. Although overt scurvy was not found, serum ascorbic acid levels were extremely low among the Inuit, as were serum folic acid concentrations. Neither finding is surprising, when their access to fresh fruits and vegetables is considered. In contrast, the intake of thiamine, riboflavin, niacin and protein appeared to be relatively high. Vitamin A levels tended to be low, perhaps due to depletion of liver storage. Anemia was not prevalent but iron depletion was widespread.

The question is posed whether there may be some undetected harmful sequelae of the depleted levels of Vitamin A, folic acid, and iron among the Arctic peoples. Followup data are difficult to acquire on the hypertyrosinemia question and others, not least because the Inuit have been over-researched already. The importance of these matters to the health of the Eskimos themselves is emphasized.

Wei Wo, C. K.; Draper, H. H.

Vitamin E status of Alaskan Eskimos. *Amer. J. Clin. Nutrit 28:* 808:813, 1975.

This paper discusses the findings of a survey carried out in 1971-73 on the Vitamin E status of Eskimos from four Alaskan villages. The authors are with the Department of Food Service at the University of Illinois.

The study was undertaken because of the observation that the Eskimos do not regularly eat the kinds of foods from which the American population generally derives its Vitamin E. Blood samples were taken from 315 subjects from Wainwright, Point Hope, Kasigluk, and Nunapitchuk. Samples of Native foods from these areas were also analyzed for Vitamin E and for polyunsaturated fatty acids (PUFA).

Serum alpha-tocopherol concentrations ranged in value from 0.38 to 3.33 mg/100 ml. None of the individuals had a level below 0.3/mg/100 ml, a value felt by some to be the upper limit of a deficiency state. There was a significant increase in plasma vitamin E with age, but no differences were attributable to sex or to geographical factors.

Chemical analysis of Native foods showed the concentration of alpha-tocopherol, expressed as mg/100 ml of lipid, ranged from 0.52 for caribou tallow to 8.9 for seal oil. The proportion of PUFA's varied from 5.2% in caribou tallow to 30.0% in seal oil.

A diet survey in Wainwright during the time of this study showed that 45% of the calories in the diet of adults resulted from Native foods. The percentage was lower in children.

The ratio of vitamin E to PUFA in Native foods seemed to be adequate to maintain good nutrition with respect to vitamin E, despite the relatively low intake of the vitamin itself.

Ament, M. E.; Bill, A.H.

Persistent diarrhea due to sucrase-isomaltase deficiency in a postoperative child with Hirschsprung's disease. *J. Ped. Surg. 8:* 543-545, 1973.

This paper is a brief case report of an Alaskan Eskimo child with sucrose intolerance due to enzyme deficiency. The authors are with the University of Washington in Seattle.

At the age of 10 months the patient was operated upon for Hirschsprung's disease proven by biopsy performed at ANMC. Postoperatively the child developed diarrhea and stool incontinence. These problems persisted over the next five years and prevented the child from attending school.

Screening tests for the chronic diarrhea were normal except for an acid pH of the stool. A sucrose tolerance test resulted in a flat curve and small intestinal biopsies revealed an isolated deficiency of sucrase-isomaltase.

When the child was placed on a low sucrose diet, stools became formed within 24 hours. He subsequently enrolled in school.

Feldman, S. A.; Rubenstein, A. H.; Ho, K. J.; Taylor, C. G.; Lewis, L. A.; Mikkelson, B.

Carbohydrate and lipid metabolism in the Alaskan Arctic Eskimo. *Amer, J. Clin. Nutrit 28:* 588-594, 1975.

This study was carried out among residents of Point Hope and Eskimo students from the North Slope temporarily residing at Mt. Edgecumbe. The principal authors were with the University of Chicago.

About 160 volunteers from Point Hope participated in the study, together with 41 teenagers from Mt. Edgecumbe. Blood samples were analyzed for glucose, insulin, cholesterol, triglycerides, and lipoproteins. In addition, a number of individuals underwent tolerance tests. Dietary histories from both groups were taken.

The Point Hope group showed unusually low serum triglyceride levels as well as low density lipoprotein levels, but their glucose and tolbutamide tolerance tests were normal. The Mt. Edgecumbe group, who were eating a diet much higher in carbohydrate and glucose content, showed significent elevations of triglycerides and some minor changes in glucose tolerance. Serum cholesterol levels in the two locations reflected dietary cholesterol intake. In the Point Hope group, the levels of free fatty acids were unusually high, although without evidence of ketonemia.

–Robert Fortuine, M.D.

LETTERS TO THE EDITOR

Dear Sir,

These are comments on the Commissioner's column in the January 1976 issue of Alaska Medicine. The general topic appears to be "mental health," and it must be recalled that the term "mental health" has long been as opprobrious to us professionals in the field as the terms "health care" and "health care providers" have more recently become to the rest of the medical profession.

took over as medical director at Morningside, then Alaska's Mental Hospital in Portland, Oregon. And as of February 29, it is four quadrennia since I left Alaska state service and established Langdon Psychiatric Clinic. During that span I have known all the full-time Territorial Commissioners of Health and all to date, Commissioners of Health and Welfare (or Social Services as it has been delicately renamed). The present commissioner's article is probably not much worse than those of his predecessors', but the discouraging thing is that after 20 years it is no better, no more truthful and no more reality-oriented.

I do not wish to recount the sins of the public mental health activities over the last 20 years in Alaska. Suffice it to say that the history gives complete backing to the inaccuracies of the Commissioner's article.

(1) API — said to have shown marked improvement. API is now on its third superintendent in one year and he has received a contract termination. The medical staff now is one less in number than a year ago, due to the retirement of Doctor Rollins. The revolving superintendent's position has been filled by three bodies, but only one at a time, so far. The sluffing of ward use in the hospital does not mean an improvement or an increase in quality of services.

(2) Harborview in Valdez, once the only star in the Alaska *public* mental health area, is a shambles. Naturally the pipeline has had a disastrous impact on staffing, but the state bureaucracy had a more devastating one in refusing to continue the advanced rehabilitative programs that had been in effect there. This in effect negates any claims for improvements in the developmental disabilities sector (this is, of course, a euphemism for mentally retarded, if you hadn't noticed).

(3) Cooperation with the private sector. In this at least the Department can claim consistency. It has constantly been at odds with the private sector, has never cooperated except grudgingly.

Item: The continued operation of Alcantra both before and after the child welfare league's devastating report can only be seen as a state competition with Alaska Children's Services (Jesse Lee) and Turning Point operations. Both have considerable drawbacks (none as bad as Alcantra) but many of them are due to poor state funding and cooperation.

Item: The Community Mental Health Act has been used primarily to fund the Anchorage free clinic, this in a community of over forty private mental health professionals, including fifteen psychiatrists. The Commissioner's list of programs did not include Fairbanks, the pipeline impacted town which has only two private psychiatrists with neither of whom the Department is on speaking terms.

Anchorage did not need a community mental health center but more cooperation from the State. Fairbanks may or may not need one, did not get one, and gets no cooperation from the State.

Nearly all the other communities cited by the Commissioner are getting cooperation only from pressure by the local Native groups — presently a politically powerful influence. Homer and Cordova have been developed by private medical and psychiatric influences as were Kodiak and Ketchikan years ago. The State has *never* shown any initiative toward developing patient care since 1960.

Item: Not only has the Division of Mental Health refused to cooperate with the private sector, it has also failed in cooperation with its sister Divisions of Corrections and Social Services. The Commissioner's comments about Medicaid and Medicare refer to efforts by the Division of Mental Health to receive Federal funds for their sleazy programs, not to see that private practitioners and hospitals can get services for welfare recipients.

The Commissioner, as have most of his predecessors, refers to Alaska's mental health services as if they were only delivered by public systems. As with most medical services, mental health — properly called psychiatric — services are delivered by the private sector. If they are not well delivered in the bush it is not because the private sector has not tried, it is because the public sector has failed, snarlingly, to cooperate.

The Commissioner need not feel these comments are personal to him, except that he signed the column. He is only one of an increasingly long line of obfuscators, hubrisfactors and factota of mediocrity.

Sincerely,
J. Ray Langdon, M.D.

The romance of Dr. Fish's call to arms is as irresistible as it is unobtainable. The choice between a militant cadre of knight-errants cleaving to a medical Camelot and abject surrender into "faceless anonymity" is not only bleak, but misleading, for there is a third possibility: Change.

Though a thousand well-armed physician-warriors attack society's great wall of reform, their efforts are futile; and though their elegies be sung in the halls of local medical societies, their heroism is mock and their accomplishments moot.

Whatever epic traditional status the physician has enjoyed is gone. The war has changed and honor is not a bureaucratic notion: Hotspur is dead, Buffalo Bill is defunct.

Now is the time to change tactics to build a horse of sleek and cunning design. A "gift" that will be received within the great walls of social change. From within, some kind of "victory" is possible that will certainly overshadow the trench warfare that now exists between government and private practitioner — a no-man's land of bureaucratic barbed wire.

The quixotic figure of the private practitioner tilting the windmills of social change no longer affords the amusement of mock heroic which requires time and distance for appreciation; the time is upon us. We are not the Red Baron and there are no Sopwith camels; we are the bearers of a gigantic weight of technological advance and responsibility. And every mile we fly (or limp) is under electronic surveillance with political hardware poised to strike.

It is convenient and ego-supportive to place the blame for the physician's plight on others, but time is running out and an honest dose of introspection holds some chance of cure; the necessity for a reformation of the physician's self-image will be clear, for through the looking glass of this elixir, you will have seen the "enemy" and they are us.

J. David Williams, M.D.

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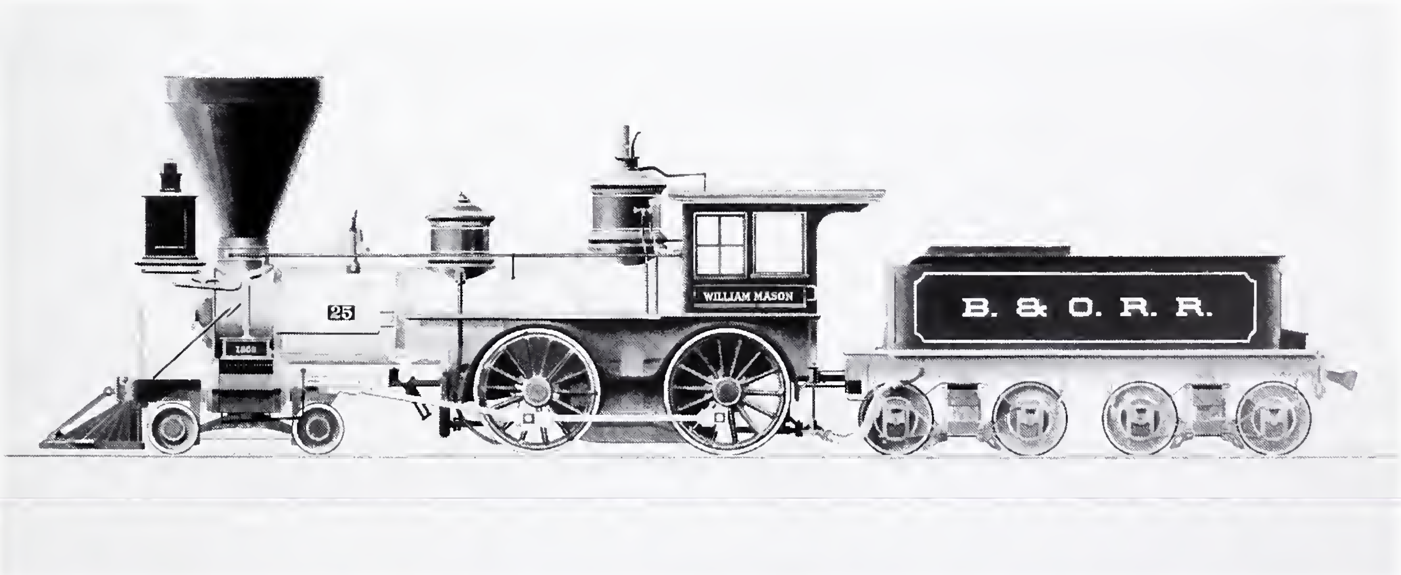

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Official Journal of the Alaska State Medical Association

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olume 18 July 1976 Number 4

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About the Cover:

THE ARTIST: Gary Lyon was born in Massachusetts but is an Alaskan by choice. He studied painting and drawing at the School of the Museum of Fine Arts in Boston and was awarded the BFA degree from Tufts University. In 1972 Gary came northward to Alaska and has since made the state his home. His subjects are Alaska's wild animals and birds. His medium is watercolor. His style is a natural realism that is executed in fine detail with attention to biological accuracy. Gary Lyon's paintings hang in many private collections and galleries throughout Alaska as well as in the "lower 48" states.

THE ANIMAL: is a yong red fox in summer. Red foxes are found throughout Alaska and are much sought by trappers for their beautiful long coat. They are shy and intelligent animals and make their living from catching small mammals and birds and from finding carrion. An average red fox is about 3½ feet long, including the tail, and weighs from 10 to 15 lbs.

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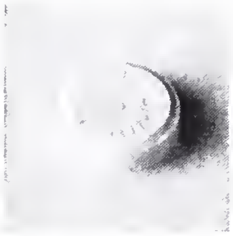

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PLASTIC BAGS AND BOTULISM: A NEW TWIST TO AN OLD HAZARD OF THE NORTH

MICKEY S. EISENBERG, M.D.

THOMAS R. BENDER, M.D., M.P.H.

ABSTRACT

This paper is a epidemiologic commentary on recent botulism epidemics in Alaska beginning with 1973. Eight outbreaks involving 21 people with four deaths have occurred, a rate that is 200 times the national rate for this period. All outbreaks involved Alaska Native foods and five of the eight were associated with the use of plastic coverings to facilitate fermentation or to store food. If physicians are suspicious of symptoms that could be botulism they might reduce mortality from respiratory impairment. And if Alaska Natives are informed about the dangers of using anaerobic conditions (including the use of plastic bags) to store or ferment food, they might avoid altogether this hazard of the North.

The journals of Arctic explorers contain several accounts of entire Eskimo families dying after eating whale meat. Only in the last 30 years have sufficient laboratory services been available to prove that many of these poisonings are due to toxin produced in food by *Clostridium botulinum*. Fifteen years ago, the unique problem of Arctic botulism was well recognized in Alaska[1], and in Canada was referred to as "a hazard of the North."[2]

The toxin produced by *C. botulinum* is one of the most potent known. Less than 0.1×10^{-3} mg. can kill a mouse[3], and it has been estimated that one gram may be sufficient to kill everyone in Alaska. When ingested, botulinal toxin is absorbed, passed into the bloodstream and carried to peripheral nerve endings, where it causes muscle paralysis. Death may result when the muscles of respiration are affected. Attempts to reduce mortality in Alaska have been aimed at detection of cases early enough to administer antitoxin and to treat respiratory paralysis with intensive medical care.[4]

Each of the seven known types of *C. botulinum* produce toxin. In the continental United States, type A toxin is most frequently encountered, often in improperly prepared home processed or canned foods. In Alaska, type E is the predominant toxin, although outbreaks from type B and type A have occurred.[5] This paper, a summary of botulism epidemics in Alaska since 1973, has been prepared to call attention to a recent increase in cases, to point out the association of many of these cases with food fermented in plastic, and to alert all physicians in Alaska of the need to be suspicious of symptoms that could be botulism. Numerous

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From the Bureau of Epidemiology, Center for Disease Control, Public Health Service, U.S. Department of Health, Education and Welfare. Reprint request to Alaska Activities, Center for Disease Control, 225 Eagle Street, Anchorage, Alaska 99501.

clinical and therapeutic summaries of botulism have been published,[6,7] and will not be reviewed here.

THE EPIDEMICS

Since 1947, there have been 23 outbreaks involving 50 people, with 16 deaths, an overall case fatality rate of 32 percent (Figure). All outbreaks in Alaska involved Eskimo or Indian people and were related to eating Native foods. During the period, February 1, 1973 to January 30, 1976, eight outbreaks involving 21 people with four deaths have occurred. This apparent increase in the number of cases gives Alaska a rate that is 200 times the national per capita rate for this period.[5]

The eight recent outbreaks are summarized in the table. All of the patients included as cases had symptoms of botulism, and 12 had evidence of toxin in their serum or stool. In two of the eight epidemics, toxin was found in the suspect food. Five of the outbreaks involved the use of plastic bags. Plastic bags were used in the preparation of fermented beaver tails in outbreaks 1 and 7. The tails were wrapped in the bags, then placed under a stove for two weeks to allow fermentation. Plastic was used to cover dried whitefish inside a food cache in outbreak 2, and in outbreaks 3 and 8, plastic bags were used to ferment raw whitefish.

PREVENTION

The increase in botulism outbreaks has renewed interest in preventing further botulism cases and deaths. The immunization of high risk persons with trivalent (ABE) botulinal toxoid is under consideration but at present two main approaches to the problem are being emphasized: The early recognition and treatment of cases, and the elimination of *C. botulinum* and its toxin from foods.

The first approach, early recognition, is important because appropriate antitoxin therapy coupled with good supportive care can reduce mortality.[4] A high level of suspicion and a carefully taken history are necessary to make the diagnosis. In Alaskan cases, five presenting symptoms have occured with great frequency, forming a diagnostic pentad: (1) nausea and vomiting, (2) dysphagia, (3) diplopia, (4) dilated pupils, and (5) dry mucous membranes. In all 21 cases involved in these eight most recent outbreaks, at least three of the five signs and symptoms were present. Despite the fact that all outbreaks have involved Alaska Natives who have usually received health care from Public Health Service personnel, physicians in private practice should be aware of the need for early diagnosis of botulism. Urban Alaska Natives may seek medical care from physicians in private practice, and because of the frequency of travel and the transport of foods, any physician in Alaska may encounter botulism.

The second approach, the elimination of *C. botulinum* and its toxin in foods might be accomplished in several ways. An attempt to avoid spores during food preparation would be helpful, although it is probably difficult to totally avoid botulinal spores in preparation of local foods. Spores of *C. botulinum* type E have been shown to be ubiquitous in western and southeastern Alaska.[8] In addition, the recent outbreaks due to type B and type A toxin and demonstration of type A and type B organisms in cultures of food and stool now proves that these types are also present in Alaska. Apparently, fish and meat are contaminated during preparation by contact with the soil or spilled visceral contents. Careful cleaning of fish and meat will reduce the likelihood of contamination, and food should be initially heated to a level sufficient to kill the heat-resistant spores. Furthermore, food should not be stored under the warm anaerobic conditions favorable for growth of organisms and toxin production. Finally, since the toxin is heat labile, food that may contain toxin must be adequately cooked.

Subsistence hunting and fishing and enjoyment of uncooked, fermented food is an integral part of the Alaska Native culture. The most heavily fermented foods are usually eaten only by adults and so it is possible that in another generation, the use of uncooked, fermented foods will decline. The already increased availability of commercially prepared food, even in remote villages, was expected to reduce the incidence of botulism. However, with increasing availability of commercial products, the use of convenience wrapping has increased, and plastic bags may provide a more perfect envelope for the creation of anaerobic conditions than any of the containers used in the past. Unperforated plastic film was recently shown in a laboratory study to lower oxygen content inside packages of mushrooms inoculated with *C. botulinum* spores, type A and type B, to a level low enough for production of toxin within three to four days at 20°C.[8] Since January 1973, five of eight outbreaks have been associated with plastic used to store or ferment food and the three outbreaks with fatal cases all involved fermented food wrapped in plastic. In contrast, in the 15 outbreaks prior to 1973, the use of plastic bags was not reported.

Efforts are under way to educate both Alaska Natives and health professionals about the dangers associated with uncooked food prepared and stored in an anaerobic manner, including fermentation in plastic bags, and the importance of early recognition of symptoms that could be botulism. The Alaska Department of Health and Social Services, the Alaska Area Native Health Service, and the Center for Disease Control, hope to spread the message through radio, television, newspaper articles, health aide training sessions, medical conferences, and reports published in the medical literature.

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RECENT BOTULISM OUTBREAKS IN ALASKA

Outbreak Number	Date	Location	Persons Ill	Deaths	Symptoms	Toxin in Clinical Specimens	Toxin in Suspect Food	Use of Plastic Bag or Covering	*C. botulinum* cultures
1	Feb. 73	Clarks Point	3	0	Diplopia, vomiting, dysphagia, dysphonia, dilated pupils, upper extremity weakness.	Specimens inadequate	Fermented beaver tail, not studied.	Yes	
2	Dec. 73	Chefornak	9	0	Diplopia, dysphagia, dry mouth, dilated pupils, respiratory depression.	Type B	Dried whitefish, no toxin found.	Yes	Type B and type A isolated from stool.
3	July 74	Sheldons Point, Emmonak	1	1	Diplopia, dysphagia, dysphonia, dry mouth, respiratory depression.	Nonspecific Toxin	Fermented whitefish, not studied.	Yes	
4	Sep. 74	Stebbins	2	0	Vomiting, dry throat, double vision, dilated pupils, respiratory depression.	Type E	Meat from seal found dead, stored in oil, Type E toxin.	No	Type E and type A isolated from stool and food.
5	Oct. 74	Homer	1	0	Diplopia, vomiting, dysphagia, dry mouth.	Specimens inadequate	Seal meat in oil or beluga sent from Kivalina and Pt. Hope, no toxin found.	No	Type B isolated from stool and seal meat in oil.
6	Nov. 74	Scammon Bay	1	0	Vomiting, dysphagia, dry mouth, dilated pupils.	Type E	Dried salmon stored in seal skin poke, no toxin found.	No	
7	Mar. 75	New Stuyahok, Manokotak	3	2	Diplopia, vomiting, dysphagia, dysphonia, respiratory depression.	Type A	Fermented beaver tail, Type A toxin.	Yes	Type A isolated from food.
8	Jan. 76	Chevak	1	1	Vomiting, dry mouth, dilated pupils, urinary retention, respiratory depression.	Type E	Fermented whitefish, not studied.	Yes	
	TOTAL		21	4					

Figure. Botulism in Alaska, 1947 through January 1976. Outbreaks associated with the use of plastic are colored black. No cases occurred 1961 through 1966. The year 1976 is incomplete.

OF DOCTORS, FOMA AND GRANFALLOONS*

J. DAVID WILLIAMS, M.D.

"Between the idea and reality falls the shadow," and it falls across the 1970s darkening the glass of social change. It is ironic that as one ages, the eyes become farsighted, while the soul becomes myopic. Nothing is constant but change. "Everywhere the old order changes and happy are those who can change with it" was a remarkable legacy of vision from William Osler. It is not mere happenstance that a recent recipient of this "father of medicine's" professorship should echo the same refrain. Dr. Paul Beeson's address to the graduating class of the University of Washington's School of Medicine takes cognizance of fact that "the health industry has now reached such proportions that we cannot expect our fellow citizens to permit us to operate it as solo managers . . . controls will be imposed soon. It is to be a time of change. You can learn the new language better than my generation . . . and move our profession into a posture of greater responsibility. In that way, you can safeguard the great assets of American medicine."

The 1960s were, and the 1970s are, times of enormous flux. The fabric of social interaction has been torn apart and reassembled so many times that today's fads are tomorrow's mores. The patterns of living are not the strong, reassuring plaids of the mid-twentieth century, but vague pastels that flash upon a shifting screen, out of focus, and disappear before we can grasp their meaning.

The cataclysm of social change, the overpowering and seemingly chaotic vortex of compulsive acts, is not without warning or meaning. Marshall McLuhan foretold its birth, while Barry Commoner and the Club of Rome have chronicled its impact upon frail mother earth.

Technology is the progenitor of the present beast that has seized society in its jaws and threatens to shake it apart. But like its progeny, the computer, television, the rocket, the bomb — technology is amoral and blameless: it is man alone, somewhere in his neolithic-frontal-lobed wisdom that has created the present crisis. As Swift sarcastically foretold three hundred years ago in his scientists who grew "woolless sheep," man is responsible for what he does, and the equation of good and evil is bracketed by *homo-sapiens.* If a "wasteland" truly exists in the 1970s, it is not someone or something else that in reality should shoulder the blame: it is we ourselves.

Self-condemnation is not without a redeeming quality, for having achieved this insight, motivation for change will appear *pari-passu.* If this process can be accomplished, prospectively with vision and evolution, then retrospective, and too often convulsive and revolutionary corrections will be unnecessary.

Was Watergate really necessary to accomplish political reform when corruption of the "democratic process" was loudly heralded for decades by numerous observers? Was Viet Nam necessary to visualize the reality of CIA chicanery that everyone "heard about"? Will economic, and tax, reform come by prospective and carefully thought-out evolutionary means? What about the legal system? Will the Gorgon knot of the tort system be carefully untied, or rent by some revolutionary sword of reform?

And finally, where does medicine appear in the widening gyre of social reform? What "rough beast" slouches toward Washington to be born? What was medical practice like 15 or 20 years ago when a doctor's word had the authoritative and reassuring ring of a silver bullet thrown on to the plate of patient distress? What is it like now when every medical utterance is gagged by governmental papier mache? Has not the old way become a rubber crutch a fatuous "Foma"?

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* Vonnegut, Kurt; *Wampeters, Foma, and Granfalloons;* 1976; Dell Publishing Company. FOMA: "harmless untruths intended to comfort simple souls." An example: "prosperity is just around the corner." GRANFALLOONS: "a proud and meaningless association of human beings."

Has the AMA served you well, or is it not, in fact, a "Granfalloon"? Has the resistance to change really worked? Is the present system livable? In a final Aristotelian sense, does the present system make you happy?

These are rhetorical, but important questions that must be asked and answered if change is to be made: a change large enough to make a difference that would truly "safeguard the great assets of American medicine." The jargon of federal and state attempts at medical control have a depersonalizing ring (health care provider) as well as an acronymic intimidation (HMO, CHP, HSA, IPA, etc., etc.). Too often this brings down with a clang the resistive, steel-trap minds of many who feel that an ostrich posture of self-defense will somehow make reality disappear. On closer examination, some of these bureaucratic forms of "organized medical care delivery" are not so unpalatable as one might think.

If we as doctors are, in fact, the axis of the health care system, does it not also follow that we are, and will be, held responsible for the escalating cost of the health care industry? It is a kind of moral blindness to be captains and not accept the responsibilities for the cost of the game. Mounting hospital and pharmaceutical costs over which we have exerted little control come squarely to rest on our shoulders as the "doctor bill." Rather than maintaining a defensive distance and hiding behind the skirts of the third party payment system (which gives only additional momentum to the spiraling costs), would it not be more honorable, less expensive and certainly more realistic to say, "Yes, medical care delivery is our responsibility and we would like to change the way it is presently managed"?

Immediate reaction of most will be to say, "Let's scrap all the present rules and regulations of the game and start over" — nothing, unfortunately, happens that way now or ever. Another choice is to come up with a better alternative to the present system. This is a reasonable choice since the people in the stands (your patients) are about to select 10 more referees to see that you play the game exactly by the rules set down and "reduce the cost of playing the game." That is a difficult task when one considers the fact that health dollars will be needed to pay the salaries of the new referees.

As long as you play the game, in Blue Cross (and/or other third party) stadiums, the health care costs will escalate and the "doctor bill" will increase. While you are out fighting disease on the field, the tickets for admission will go up, hot dogs and popcorn will cost more, and your wage for fighting disease will decline and the complaints about the cost of the game will mount. Booing from the stands will become more intimidating than the recent hoots heard when we fumbled the ball on the malpractice play. What solution is there finally?

Simplicity itself: move the game to a new stadium in which you and the fans both own stock. The result: everyone has a vested interest in holding down the cost of playing the game — medical care. Theoretically the game should be played more quickly, with greater efficiency (fewer referees) since prolongation of the game is to no one's advantage: the converse of the present situation today. Abuses of this system are possible, and initially even probable, but the long-term reality of this venture is infinitely more realistic than the present system.

What do you have to do to move the game? Almost nothing. You continue to wear the same uniform and play in the same position. The fans, however, must buy season tickets, and in return for that, they are not charged anything else. Hot dogs and popcorn have a fixed price; games that go into overtime are at the player's expense.

Without pushing this cumbersome metaphor into allegorical bathos, the change has a heinous acronymic name — IPA — Independent Physician's Association. This essentially allows the aspects of private practice that most consider vital to medical care to remain unaltered, while it simultaneously forces the patient and the physician into an economically realistic relationship. The system will have a bureaucracy — but one that is local — "homemade." It is one that will be no better and no worse than the doctors that practice and the patients that live in the surrounding community.

Think it over! The present game is into triple overtime; the fans are restless, some frightened and penniless, others surfeited and bored — the mood is for something different, the murmur is for change — "The answer, my friend, is blowin' in the wind." □

PRESIDENT'S PAGE

Robert D. Whaley, M.D.

As expressed at our June annual convention in Anchorage, our many thanks go to our immediate past president, Gary Hedges, for his work during the rather hectic past year. As inadvertently not expressed at the convention, we extend our thanks also to Douglas G. Smith for his two years as Secretary-Treasurer in which he helped bring considerable order and discipline to a function performed somewhat amateurishly at times in the past. Happily the Executive Committee will continue to have ex-president Rodman Wilson supply dedication and needed continuity in his role as our new Secretary-Treasurer. William Doolittle was elected as President for 1977-78 but found himself unable to serve. In accordance with the bylaws, a replacement will be chosen by the Council. This will be done in September. J. Ray Langdon was elected alternate-delegate to the American Medical Association. Holmes Johnson of Kodiak was elected councilor-at-large.

Our Anchorage meeting gave the impression of being poorly attended, although there were 77 physician registrants as compared with 69 at the rather enthusiastically supported Glacier Bay meeting the year before. This probably derives from the smaller fraction of sessions attended by registrants when it is in a local community such as Anchorage as compared to the smaller but "captive" group at more rural settings. Along this line, considerable enthusiasm was evidenced at the meeting for an annual get-together outside of major population centers. Serious consideration was given to meeting at McKinley Park, which seemed feasible, but the Fairbanks Medical Association, which will host our meeting next spring, plans to have the meeting at the Traveler's Inn in Fairbanks. Mt. McKinley Park Hotel remains a possibility for 1978.

A number of resolutions were passed by the membership at the June meeting in Anchorage including a plea to its members not to participate in programs not paying usual and customary fees; a statement urging the federal government gradually to withdraw from direct practice of medicine in Alaska; a recommendation to ASMA members to cooperate with a swine influenza immunization program this fall on an individual basis but skirting an official endorsement of such programs; and endorsement of the stand of the Alaska District Branch of the American Psychiatric Association recommending an investigation and probable overhaul of the administration of Alaska Psychiatric Institute.

A letter was sent to the Governor stating that the new regulations by which members of the State Medical Board are appointed without recommendations from organized medicine effectively destroy our responsibility for quality assurance and for medical discipline through this board and recommended legislative changes to correct this. Several resolutions were passed having to do with arrangements for appropriate continuing medical education requirements for Alaskan doctors as is specified in the new health services law. Dr. David Johnson of Ketchikan introduced two resolutions regarding federal health facilities, one urging their participation in the various review programs to which other health care providers are subject, and the other urging federal utilization of local health care professionals and facilities wherever possible, and these were passed. It was also pointed out by Drs. Johnson and Steer that Native beneficiaries whose health care facilities and programs are excluded from the effect of HSA decisions are presently sitting on the board issuing regulations, and that this is inappropriate. The membership recommended to the Governor that he veto HB 584 on drug substitution and HB 881 on Laetrile.

Under new business, consideration was given to the acquisition of property for a State Medical Association office in Anchorage. A committee under the direction of Douglas Smith was appointed to investigate this further. Certain economies are probably available through this approach but it will entail a commitment of the association to a moderate debt.

The House of Delegates recommended that a committee be appointed to consider the value of a national medical union as a bargaining agent in addition to our professional association. This was on the recommendation of Dr. Fritz. A committee will be appointed.

No one was completely happy with the details of the new malpractice law and estimates of its effects varied from reasonably comfortable to disastrous. The next few months should give us some insight into its initial workings as the premium structure is set by the Medical Indemnity Corporation of Alaska. A number of other important policies might be seriously considered by its board of governors such as the vigorous prosecution of defense where justified, rather than settlement, and the institution of countersuits against lawyers bringing unfounded malpractice suits. We will work during the next few months toward the establishment of MICA policies that will encourage medical care undistorted by suit consideration, and that will hopefully contain the total cost of the program ultimately borne by the public. Also of interest will be the new provisions and policies promulgated by the State Medical Board in arranging for disciplinary actions, investigative procedures, and for continuing medical education. Your councilors and officers welcome comments from the membership during these next weeks preparatory to our Council meeting in September.

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Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

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Final classification of the less than effective indications requires further investigation.

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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ALASKA'S NEW MEDICAL MALPRACTICE LAW
CHRONOLOGY AND COMMENT

RODMAN WILSON, M.D.
Chairman, Malpractice Committee
Alaska State Medical Association

Although malpractice insurance crises had occurred in Alaska in past years, notably in 1968 when our widely copied "negligence cannot be presumed" statute was enacted abolishing *res ipsa loquitur*, nothing compares historically with the upheaval in 1975-76. On May 28, 1976 Governor Hammond signed into law a bill passed six days earlier by both houses of the legislature entitled, "An act relating to health care; changing the Alaska Supreme Court's rule of civil procedure, and providing for an effective date." Salient features are listed in the box accompanying his article.

The story began in 1974 when Dawson & Co., broker for the Alaska State Medical Association, told approximately 100 policyholders that Casualty Indemnity Exchange was cancelling policies on July 1, 1974. It was later learned that C.I.E. policies were "claims-made," a term totally new to physicians then but now painfully and thoroughly understood. It was further learned that C.I.E. went or at least nearly went into receivership. Dawson then placed most of the policies with Manufacturers and Wholesalers Indemnity Exchange, writing through Glacier Insurance Company of Missoula, Montana. Manufacturers in turn failed, policies being cancelled December 31, 1974. The storm broke.

January 1975: Most of the anesthesiologists at Providence Hospital, Anchorage, the largest hospital in the state, found themselves without insurance. They refused to work except in bona fide emergency situations. Elective surgery ceased. A delegation of physicians from the Anchorage Medical Society and the ASMA (Ashby, Seuffert, c. Brown, R. Wilson, Whaley) went to Juneau to explain our plight. We were joined by Hedges from Juneau. At a hearing of the Senate Commerce Committee on January 28 we proposed a straightforward solution: limit awards to $100,000, subtract from the award amounts recovered from health and disability insurance, disallow payments for pain and suffering, and abolish the ad damnum clause. These proposals were introduced at our request by Representative Ted Smith in HB 98, a 15-line bill.

Meanwhile a new broker for ASMA, Marsh & McLennan, Inc., found claims-made insurance for anesthesiologists, issuing binders on payment of $7,500 pending development of a plan for all physicians wanting coverage. Providence Hospital anesthesiologists returned to work — actually they had stopped for only five days.

February 1975: Little progress was made legislatively. Sympathy was expressed by legislators for the doctors' plight, but no one knew quite what to do about it. Hearings were held on HB 98, but the bill was eventually dismissed as simplistic despite eloquent testimony by Juneau physicians Ratcliffe, Franklin, and others. A more elaborate proposal was then made by the ASMA introducing the concept of social insurance by asking the state to participate in awards. The proposal called for an adjudication board, a strict two-year statute of limitations, abolition of contingency fees, prohibition of payment for pain, suffering, or punition, mandatory insurance or self-insurance to minimum of $100,000, and structured awards, using collateral sources, in which the negligent party would make initial lump-sum payments for death or loss of parts or function similar to Workman's Compensation schedules and already incurred medical expenses. The proposal then called for a two-year period periodic payments for loss of wages and ongoing medical expenses or, in case of death, support of dependents. After two years, payments would come from public sources as long as support was needed, up to certain limits. These concepts were embodied in HB 436 but not introduced until April 1975.

March 1975: On March 16 the Council of the ASMA accepted a program developed by Mr. Dexter Mapel of Marsh & McLennan which offered claims-made insurance on an individual underwriting basis to any

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[1] Dr. Wilson is an internist in private practice at 3300 Providence Dr., Anchorage, Alaska 99504.

Alaska physician. Shand, Morahan & Company, Inc., Chicago, was the underwriter; Mutual Fire, Marine and Inland Company, Philadelphia, was the insurer. Excess coverage was diligently sought by Marsh & McLennan but never found. Premiums for basic $300,000 were high by Alaska standards rising from $1,101 for Class I physicians to $12,084 for Class VI surgeons and anesthesiologists, with three-year "tail" coverage costing 150% of the annual fee if the policyholder or the company cancelled. Furthermore the company did not promise to stay beyond December 1975, later extended to April 1976. Approximately 35 physicians eventually purchased Mutual Fire policies, paying about $188,000 in premiums. At least three claims against insured doctors were made; their disposition is pending. The program was never popular despite the fact that at least 51 of approximately 320 Alaska physicians in private practice did not have insurance in May 1975. The figure rose to 100 by January 1976.

April-May 1975: HB 436 was referred to the House Health and Judiciary committees, but it did not get adequate hearings. Several were scheduled but cancelled, sometimes after physicians had traveled from Anchorage 550 air miles for the hearing. Because the Legislature appeared to be on the verge of adjournment in mid-May, it was asked not to consider HB 436 further in 1975, for the bill contained many startling concepts none of which had been adequately aired. This probably was a mistake. Later we were roundly criticized by legislators for the maneuver. By now lawyer legislators in the Senate believed that all that was needed was a Joint Underwriting Association bill (SB 361) to insure the uninsured. The ASMA, assembled at Glacier Bay National Monument for our annual meeting May 24-27, pondered these matters, called for an Indiana-type bill, and decided to ask for a special session of the Legislature. We were neutral about the JUA bill feeling that it alone would do little to rectify the situation.

June 1975: The Legislature struggled on into the first week of June still without enacting a malpractice bill although a total of eight bills touching on the matter had been introduced. It finally passed SB 361 and shortly thereafter adjourned.

July 1976: Governor Hammond vetoed the JUA bill partly because of outcries by Blue Cross which had been included in the JUA as a casualty writer. They claimed that they were not such by charter. We then made through President Hedges the first of many requests, all unsuccessful, for a special session of the Legislature to deal with the crisis.

Instead the Governor appointed a commission to study the matter. It was designated "The Governor's Medical Malpractice Insurance Commission." Note the word "insurance" in the name. It bespoke a commitment to restore the *status quo ante*, an attitude which was to remain rock-hard. Corrections not involving insurance were never seriously entertained by the commission. On the commission were four attorneys, three casualty insurance men, three physicians (R. Wilson, Anchorage; Kinn, Fairbanks; and Whaley, Anchorage, replacing J. Wilson, Ketchikan, originally appointed), a nurse, a hospital administrator, a dentist, two legislators, and two persons from the "public." R. Witt, Hedges, and Stengl substituted at times for the physicians. The commission was chaired by Tony Motley, Commissioner of Commerce and Economic Development. He was ably assisted by Richard Block, a Los Angeles insurance company executive and attorney. The commission met on 27 separate days and for over 175 hours beginning July 28, 1975, completing its report to the Governor on October 31, 1975. During July and August many long sessions were held. Over 50 persons testified including many physicians. Many doctors' wives monitored the tedious hours.

As nearly as anyone could count only 66 malpractice suits, awarding a total of $2,871,000 had occurred in Alaska between 1957-1974, an average of 3.7 cases and $160,000 per year. Twenty-three cases were pending in August 1975. The copyrighted study by Maureen Blewett appeared in July 31 and August 4, 1975 issues of the *Anchorage Daily News*.

Meanwhile the Anchorage Medical Society held three special meetings under the gavel of President J. J. Smith. It was decided to engage attorneys Joe Josephson and Richard Garnett, costs to be shared with ASMA, to represent the societies. With their help Whaley, A. von Hippel, and Witt drafted a new legislative proposal calling for an adjudication board, advisory expert panels, a strict two-year statute of limitations, limitation of doctors' liability to $25,000 but contribution to a patient compensation fund for higher awards up to specified limits, using collateral sources first of rising small percentages of each physician's annual gross medical revenue. Participation in the fund was not required but if not elected limits on personal liability and awards would not apply. Attorneys' fees were also sharply

SALIENT FEATURES OF ALASKA'S
1976 MEDICAL MALPRACTICE ACT

Insurance Mechanism

1. A public company, the Medical Indemnity Corporation of Alaska, is created to issue malpractice insurance policies on an occurrence basis to physicians and hospitals.
2. As a condition of licensure or relicensure, physicians must purchase insurance in amounts of $200/600 thousand from MICA.
3. Premiums, payable on an installment schedule, will be primarily "set as a function of the physician's medical revenue earned in the state," but specialty, individual, or other underwriting factors may also be considered.
4. Excess insurance to $1 million will be offered only if the state director of insurance finds that it is not available from the private market "at a reasonable cost" and that the MICA can provide it "at a reasonable cost."
5. Retroactive insurance for gaps since December 31, 1974 will be available. It can also cover the "tail" of previous claims-made insurance.
6. A hospital is required to purchase malpractice insurance from the MICA in amounts of $200/1,000 thousand plus $20 thousand for each bed over 50, or may substitute self insurance or insurance from an admitted private carrier in like amounts so long as it agrees to a common defense and agrees not to cross-file should a physician also be named in a suit.
7. The MICA may reinsure any or all of its risks within the first two years of its existence; thereafter it must choose either not to reinsure any risk or to reinsure it all in the private market or, if necessary, part or all of it in the standby joint underwriting association.
8. MICA may borrow $3 million from the state for reserves, or $6 million if JUA is activated. Profits or losses of MICA are reflected in annual adjustments of premiums.

Discipline Measures

1. Two lay persons are added to each professional licensing board.
2. The State Medical Board may do more than suspend or revoke a license; it may reprimand, censure, restrict practice, or require further training.
3. Persons on hospital or medical society committees or state boards are immune from civil suit for their good faith activities. Proceedings of such bodies are not discoverable in court.
4. Continuing education is required for relicensure; standards are to be set by the State Medical Board.
5. Risk management programs are required in hospitals.

Tort Law Changes

1 Ad damnum prohibited.

2. Binding arbitration is allowed as long as care is not contingent upon signing an arbitration agreement. Patient, but not physician or hospital, may revoke agreement within 30 days.
3. Unless arbitration is elected, court will appoint a three-person expert advisory panel for each case filed. The panel will investigate the case, describe the medical events, and within 30 days render an opinion, admissible in court, as to whether or not an injury occurred because care was unskillful. Other legal procedures are stayed until the report is made.
4. Standard of care is "the degree of knowledge or skill possessed or the degree of care ordinarily exercised under the circumstances, at the time of the act complained of, by health care providers in the field or specialty in which the defendant is practising.
5. A suit may not be brought for injury during the course of emergency treatment unless care was "grossly negligent, reckless, or wilfully" injurious.
6. It is a defense against a claim of failure to obtain informed consent that risk was too commonly known or too remote, that patient stated that he did not want to know risks, or that it was not possible or not wise to explain the risks. Oral contracts are not valid.
7. Award will be reduced by amounts available from collateral sources, except federal programs, but these may not be exhausted. Advance payments and periodic payments adjusted to Consumer Price Index are allowed.
8. There is no limitation on awards or contingency fees, and no change in the statute of limitations (two years from discovery or ending of minority).

Effective Dates

1. Tort law changes: May 29, 1976.
2. Discipline measures: May 29, 1976.
3. Insurance mechanism: June 28, 1976; but a physician or hospital may substitute current insurance until January 1, 1977 or until policy expires before then.

limited to the lesser of Rule 82 of the Alaska Rules of Civil Procedure or $50 per hour.

August 1975: On August 1 the Surgical Department at Providence Hospital stopped elective surgery. The slowdown, led by Acting Chief of Surgery von Hippel, was in continuing protest to unavailability of adequate, affordable insurance (Marsh & McLennan policies were considered inadequate and unaffordable by most uninsured physicians). Skeleton crews remained on duty for emergencies. Obstetricians continued to deliver their patients, but several refused to take new obstetrical cases. Cardiac catheterization and open-heart surgery, off to a good start (*Alaska Medicine,* May 1976), ceased. Radiation therapy had stopped some time earlier in part due to a three million dollar suit against a radiotherapist. Endoscopy and eventually newborn intensive care services visibly attenuated. Less visible was the timidity of almost all physicians in handling patients. Anchorage Community Hospital remained fully open. The purpose of the slowdown was to precipitate a special session of the Legislature which had acted so feebly earlier. A war chest of $27,585 was raised by assessing Providence Hospital staff members $250 each. Approximately two-thirds paid it. This was used initially for full-page ads in newspapers and radio spots explaining the doctors' plight and calling for a special session. The ads were over the names of Dr. J. Tower, Chief of Staff, or Dr. Shohl, Chief of Surgery, and were written largely by Mr. Clifford Beardsley, Providence Hospital public relations officer who was generously loaned by the hospital administration to the medical staff for the purposes of the campaign. Money from the staff fund was also used to send Anchorage physicians to other communities to talk to physicians and legislators about the problem. The fund was used in 1976 to pay for the travel and hotel and dining expenses of those who traveled to Juneau during the 1976 legislative session.

On August 14, Mr. Josephson made a masterful presentation of the new AMS-ASMA proposal to the commission. It was the only major detailed proposal which was ever brought to the commission and formed the basis for a surprisingly large number of the final 26 commission recommendations.

September-October 1975: Efforts to get a special session failed. The slowdown at Providence Hospital petered out in late September. The hospital administration, which had supported the staff in their efforts to get a special session, announced that they had lost approximately $350,000 in net revenues. Hospital employees lost nearly $100,000 in wages. For a time Providence Hospital provided an arrangement for certain anesthesiologists and surgeons to be insured under the hospital liability policy so that emergency work would go on. Some of these arrangements continued for a while after the slowdown ended.

The commission completed its work in late October recommending 26 items. Prominent among them were: replacing the jury system with a five-person adjudication board (one physician), creating a late-claims fund for late discovered cases and requiring more stringent proof ("clear and convincing") than usual to win against this fund, providing a public company (MIC) from which all health care providers including institutions would mandatorily buy occurrence-type malpractice insurance, re-insuring the risk 100% in the private market, or failing that, activate a broadly-based JUA (including Blue Cross) to provide re-insurance. The 26 recommendations also included expert panels to advise the adjudication board, a national standard of practice, elimination of double payments by use of collateral resources, periodic payments, increased disciplining authority for licensing boards, and broadened exemption for treatment under emergency situations. The commission pointedly did not recommend dollar limits on awards, limitations on contingency fees, or a strict statute of limitations. The 26 recommendations were cast into bill form in the final report to the Governor on October 31, 1975. This was largely the work of Mr. Art Peterson, assistant attorney general, assisted by Mr. Block. Since the Legislature was to reconvene on January 12, the Governor decided not to call a special session.

November-December 1975: Little transpired. The Legislative Council, the interim body of the Legislature, held hearings in November on malpractice, consisting principally of the ideas of their consultant Professor Herbert Denenberg, formerly Commissioner of Insurance of Pennsylvania. He complimented the Malpractice Commission for their hard work but disagreed with most of their recommendations. His outlook was sharply anti-doctor, pro-consumer. His influence on the final bill was profound. Legislators promised early action in January. Their assurance that this was priority legislation was a promise kept; their timetable was not.

Morale within the profession was exceedingly low. Medcial conferences at Providence Hospital had virtually ceased. Many physicians had truncated their practices; a few had left for long training programs, extended vacations, or new practices Outside. Some began to rearrange personal finances, transferring assets to wife or child. The one bright spot was the travels of Anchorage physicians to other communities preaching support for the commission proposals to physicians and legislators. Stewart went to Cordova and Kodiak alone, to Ketchikan and Sitka with Witt, and to Juneau with Brownsberger. Witt, Whaley, and Brownsberger went to Fairbanks. Reinbold went to Soldotna.

January 1976: We started united. All six component medical societies (Fairbanks, Anchorage, Kenai Peninsula, Juneau, Sitka, Ketchikan) endorsed the Malpractice Commission's 26 points, feeling in a spirit of compromise that this would be acceptable. Some reservations were expressed, however, about requiring health care providers to be insured and relating premiums to medical revenues. The Council of the ASMA met on January 3 and also endorsed the commission's proposals so long as they passed intact. We engaged Mr. Josephson to lobby for us, authorizing an additional expenditure of up to $7,500. Only one medical society, Kenai Peninsula, was later to withdraw officially from its position backing the commission. Fairbanks physicians, always politically puissant, were particularly steadfast. Ketchikan doctors were very helpful to influence Senator Ziegler and Representative Gardiner. The commission in its final act made a presentation to the Legislature in Juneau January 17, but few legislators came.

We started in *blitzkrieg* fashion by having physicians, usually two at a time, continuously in Juneau. All were registered but unpaid lobbyists. Headquarters was the Juneau Hilton Hotel, Room 710, with its glorious view of Gastineau Channel. It became familiar turf as did the hotel's Timberline Room (try the lamb chops). The "right place" in Juneau is the Baranof and its Latchstring restaurant-bar. But we in a sense were not playing the game in the usual way, so we stayed at the Hilton. The legislative halls were a block and a half up the street, then up the elevator of the State Office Building ("Fort Ray"), through the building to the higher street, and across to the State Capitol, second floor. Those who lobbied thus in Juneau, usually for several days at a time, were Stewart, Brownsberger, Whaley, Wilson, Witt, J. J. Smith, Grossheim, Coyle, Shohl, and Worrell, all from Anchorage, and Kinn and Worrall from Fairbanks. Several were in Juneau on more than one occasion, Witt, now president of AMS, nine times, Wilson 12 times.

Representative Mike Beirne, M.D., was repeatedly at committee meetings though never a member of any committee considering the bills. President Gary Hedges, with that extra credibility Juneau doctors always seem to have with the Legislature, was constantly at hand for committee hearings and hallway lobbying, occasionally being assisted by other Juneau physicians Stengl and Palmer. Auxiliary member Terry Worrall spent nearly a week in Juneau lobbying the bills and Gwynneth Wilson, Auxiliary president, got in the last licks alone on the morning of May 20, following which the free conference committee abruptly reach final accord!

The first team, Stewart and Brownsberger, began as the session opened January 12, pumping for unmodified Malpractice Commission proposals. They had a difficult time in convincing legislators not to divert off into pieces of makeshift legislation. This got things off to a good start. Their work was effectively followed up in the second week by Whaley, Wilson, Kinn and the Worralls, in the third by Grossheim and Witt, and in the fourth week by Coyle and Shohl. By this time, however, it was clear that the ploy of the Senate, stung by the Governor's veto of the JUA bill in July, was not to override the veto but to pass out quickly an "improved" JUA bill while promising to attend later to the comprehensive administration bills based on the commission's ideas, now introduced as SB 522, 523 and identical HB 574, 575. Our fear was that they would never get to the main matter. The gambit nearly succeeded but for an 11th-hour referral to the Rules Committee from the Senate floor, engineered by Senator Rader after a heated caucus and winning 11-9 on a coalition vote of seven consistently friendly Republicans (Colletta, Tillion, Butrovich, Miller, Sackett, Orsini, Bradley) and four Democrats (Rader, Ziegler, Meland, Hohman). The House quickly passed a resolution unanimously promising retroactive insurance for those physicians who had practiced so long without it. The Association's August 14 proposal was introduced in the Senate by Colletta by request as SB 566 and in the House by Beirne as HB 636 as a fall-back position should the commission's proposals disintegrate. "Double-cross" was cried by some senators.

After this work began in earnest on SB 522, 523 and HB 574, 575. Senate referral was to Kerttula's Commerce Committee and to Ziegler's Judiciary Committee. Ziegler sat on Commerce along with Colletta, Willis, and Brad Bradley. He eventually graciously waived consideration by Judiciary. In the House referral was only to the Judiciary Committee, chaired by Gardiner, a 25-year old Ketchikan fisherman. He was tenacious and he was smart. It was a peculiarity and possibly an asset of the Ninth Legislature that only seven of the 60 members were attorneys (House: Brown, Cowper, Gruening; Senate: Croft, Rodey, Rader, Ziegler). House Judiciary had only logorrheic Brown as an attorney member. Other members were Bob Bradley, Cotten, Parr, Specking, Eliason, and Chairman Gardiner.

February 1976: The hardest and best work on the bills came in the House. After lengthy hearings mark-up sessions began and on several occasions went into the evening. Principals in addition to committee members were Ann Carpeneti, an attorney in the Legislative Affairs Agency who was responsible for all re-drafting of the original administration bills and who was also frequently asked for opinions on substantive or technical matters by both House and Senate committees; Tony Motley, Commissioner of Commerce; Richard Block, now Director, Division of Insurance, Department of Commerce; and physicians. Other lobbyists who monitored and manipulated were: Henry Pratt, Alaska Dental Association; Wes Coyner, Blue Cross (included again in the final JUA); Emmett Wilson, Anchorage Community Hospital (Teamster's Union); and Chris Beardsley for Providence Hospital. Wording of the final bill, where changed from Peterson's original language, was largely that of Carpeneti and Block with occasional passages or phrases from physicians, such as, sections on medical discipline, questions to be answered by expert panels, exemption for emergency care, and language on informed consent. Almost every word was a struggle. The final bill incorporated most of SB 113, authored by Ziegler and passed by the Senate in 1975, on immunity for review organizations.

The House wanted arbitration language added. The Senate, where hearings and mark-up sessions were always briefer — the cutting and pasting going on behind the scenes — wanted Denenberg features such as adding two lay persons to each professional licensing board (Denenberg really wants no professionals on boards), mandatory but non-binding arbitration, and risk management programs in hospitals.

It quickly became apparent that the adjudication board, which replaced the jury system and thereby would take a constitutional amendment to effectuate, was unacceptable to either chamber committee and not really to the Governor either. Likewise the late-claims fund for claims bought three years or more after the event got short shrift.

The ASMA Malpractice Committee met in Anchorage February 7. It agreed to drop demands for the adjudication board but demanded retention of expert advisory panels and the late-claims fund, or failing the latter, to insist upon an Indiana two-year statute of limitations. It was agreed that unless these elements were included that we would ask for no bill at all. The Council met in Anchorage February 21 prior to the Lederle Symposium and endorsed the committee action. The Council met again in Juneau on March 27 but took no action on malpractice.

At the outset all professional groups except doctors howled about having to be insured by the Medical Indemnity Corporation. House Judiciary quickly acceded: dentists, nurses, chiropractors, etc. — all the 10 other specially licensed health professionals — would be left out, at least until such time as the director of insurance found that they, too, had problems finding malpractice insurance. Otherwise the commission's package stayed together pretty well in the House bill, although the expert advisory panels barely survived a hectic mark-up session when our professional lobbyist Josephson was able during a recess to turn a 4-3 vote against to a 4-3 vote for the panels on reconsideration after bladders were drained and coffee mugs refilled.

On February 27 HB 574 reached the floor of the House. A motion by Rudd to remove the expert advisory panels failed 34-5 (Rudd, Brown, McKinnon, Kelly, Parker voting aye). The main bill then passed unanimously 39-0. HB 575 having to do with the adjudication board and placing the required constitutional amendment on the ballot was not considered.

March 1976: A few days later on March 4 the Senate passed its version, Senate Committee Substitute for HB 574 (having dropped its original bill SB 522) by a vote of 19-0, but only after a dramatic turnaround on the matter of the panels. These had not been favored by Denenberg or by most of the members of the Commerce Committee. The panels had barely survived in an emasculated, optional form through the diligent work of Whaley at a committee meeting attended by Denenberg. When they were deleted altogether in a typically brief Senate Commerce Committee meeting on March 2, we made vociferous outburst claiming that there were no longer any cost-controlling features in the bill. The chairman quickly adjourned the meeting. Thereupon

Minority Leader, Senator Colletta, on the first of several crucial occasions went to work behind the scenes. With the help of Senator Miller and perhaps others he arranged for floor amendments to re-insert the panels. Meanwhile a deluge of phone calls and telegrams to all senators poured in from all over the state from doctors, hospitals, and others, and particularly from Kerttula's large district (Palmer, Seward, Cordova, Valdez). Juneau physicians, particularly Akiyama, talked to powerful Juneau Senator Ray who in turn once convinced, may have stroked Kerttula, the Majority Leader. Colletta slyly arranged for two amendments to come out, re-inserting expert advisory panels into two separate parts of the bills, one amendment being sponsored by Democrats Kerttula, Ray, and Rodey, the other by Republicans Colletta, Miller, and Democrat Ziegler. These passed unanimously after several short sweetness-and-light mouthings on the floor of the Senate. The main bill passed 19-0. The significance was that both chambers were now committed to the panels, the matter having been tested on the floor of each house. They could hardly be deleted by the free conference committee, now imminent, although theoretically such a committee is "free" completely to re-write a bill. The unanimous votes for the bill in the two chambers was important in another respect, for a vote of at least two-thirds was necessary in each house to change court rule to appoint expert advisory panels. The Alaska Supreme Court had stoutly, yea violently, objected to the panels in a letter from Chief Justice Boochever and testimony to committees by court manager Snowden.

The free conference committee (FCC) was made up of Senators Kerttula, Chairman, Rodey, and Colletta; and Representatives Gardiner, Co-chairman, Bradley, and Smith. Speaker of the House Bradner, who followed the malpractice matter closely and understandingly throughout the session, sending all physicians written summaries of progress from time to time, originally appointed Republican Minority Leader and Judiciary Committee member Specking to the FCC, but Specking generously acceded to Democrat Ted Smith who had worked so faithfully and skillfully on the matter in the 1975 session and on the Malpractice Commission.

The FCC went right to work doing the easy parts first, that is, adopting features which appeared in nearly identical language in CSHB 574 and SCS CSHB 574 amS. One of the most productive sessions came shortly after a contingent (Cates, Rogers, lobbyist E. Wilson and Anchorage Community Hospital Administrator Webb; Fish and L. Kottra from Providence Hospital; Cannava from Soldotna) flew to Juneau in the Teamster's Union jet to make a 10th-hour protest on March 11 against literally all of the bill's features but mostly against the obligation to buy insurance from the state-created source as a condition of licensure. Much bad feeling was vented by both physicians and legislators. The net effect was to solidify the desire of the FCC members to get on with the work. There had never been any serious consideration on the part of legislators not to require doctors to buy insurance from the MIC. After this outburst there was none.

April 1976: Despite the concerted wish to finish, the FCC couldn't. There was serious disagreement now about whether the MIC created to issue policies to doctors and hospitals should re-insure in the private market to further spread the risk and whether hospitals could self-insure or at least provide equivalent basic insurance. House members did not want private insurance companies to profit from the new system. Motley and Block argued stoutly that a company not having the right and obligation to re-insure all the risks would be foolhardy and would place the state in jeopardy of having to pay losses exceeding the assets and borrowing power of the MIC even though language in the bill explicitly stated that debts of the MIC were not obligations of the state. The Governor darkly hinted veto. Meeting after meeting of the FCC was scheduled, then cancelled, adding substantially to time away from practices of physician lobbyists (Witt and Wilson once had to overnight in Seattle to get back to Anchorage at all). The matter was not actually so tough that a single three-to-four-hour session to thrash it all out could not have easily done so. But that was not to be because of reluctance to meet unless all six members were present, pride of authorship, chamber egos, pressing other priority legislation, longer floor sessions late in the session, and the admitted short attention tolerance of Chairman Kerttula. It was a matter of 15 minutes here, 30 minutes there and backroom haggling and deal-cutting.

It all argued powerfully for unicameralism which doesn't need FCC's. In fairness, however, it should be recorded that physicians never detected that the malpractice legislation was being held hostage by one faction or another for any other piece of legislation.

One casualty of the slowness of the FCC was that the legislature never got around to considering SB 549 (Kerttula and Huber), a bill modestly limiting attorney fees in medical malpractice cases to 33-1/3% of first $100,000, 25% of next $200,000 and 18% of over $300,000 unless the case was appealed and SB 550 (Kerttula and Huber) a bill limiting awards against a physician, a dentist, or a hospital to $1 million. There was much sentiment for the former bill among legislators but less for the latter because of the constitutional problems limitations on awards were raising in other states. By the time the FCC finished, consideration had been reduced to priority bills. SB 549 and 550 were not among these.

The ASMA had steadily favored the House version of the MIC with its simpler mechanism and closer control by the legislature, hoping that if it didn't work that subsequent legislatures would enact more stringent tort law changes such as a strict statute of limitations and the abolition of contingency fees. Despite this we thought that the MIC should have the right to re-insure "any or all" of the risks if it deemed that it was prudent to do so. This contention was stated to the FCC on April 28 in a paper which may have set the stage for May compromises. Unfortunately the context of the paper was misunderstood by many Anchorage physicians who were chafing increasingly under the certainty of mandatory insurance.

May 1976: Finally in mid-May a deal was made whereby hospitals could self-insure or provide basic insurance as long as they agreed to a common defense if, say, a hospital and a doctor were named in a suit and further agreed not to cross file against the doctor. That settled the hospital issue. Beardsley and E. Wilson had done their work well for their employers.

Next the matter of re-insurance. The committee had struggled ineffectually with this for over a month, but another Colletta compromise brought sudden denouement on May 20 after a particularly strained informal (or was it formal?) backroom meeting of the FCC on the afternoon before (Bradley absent) followed by an easier but still at odds breakfast meeting on the morning of May 20. From moment to moment it appeared that the MIC could (1) be cast adrift to re-insure as it wished but without any start-up funds for capital, or (2) $2-3 million would be appropriate for the MIC, or (3) a low-interest, 6%, revolving-loan fund would be provided for the MIC, or (4) a high interest, 9-10%, revolving-loan would be made to start the MIC off. By the afternoon of May 20 accord (apparently in the hallways) was reached allowing the MIC two years in which to try to re-insure all its risks. If it could not, it could then choose either (1) to re-insure none or (2) re-insure whatever it could in the private market, activating the JUA to re-insure the residual thus putting the JUA into the occurrence insurance business. This had been sedulously opposed by the Administration. Interest for loans was as in (4) above, that is, "four percentage points above the annual rate charged member banks by the 12th Federal Reserve District" — a final jab at physicians. Borrowing power of the MIC was $3 million if operational on its own or $6 million if the JUA had to be used.

The bill was "signed off" by FCC members for the second time. They had signed it first on about May 8 apparently to show everyone that they had agreed to agree even though they really hadn't. Passage of the "free conference committee substitute for senate committee substitute for committee substitute for House Bill 574" came quickly on voice vote in each chamber on May 22, 10 days before adjournment. Governor Hammond signed the bill on May 28. Tort law changes became effective May 29. Physicians and hospitals were technically covered as of June 28, but it would take several months after that to organize the MIC, receive applications, set premiums, and issue policies.

The battle had been expensive: Total costs were $29,421. Of this $16,202 came from the Providence Hospital Medical Staff fund, $10,693 from ASMA, and $2,526 from AMS. Included in these costs was $9,235 in payments to attorneys, $6,709 from ASMA, $2,526 from AMS. Fortunately travel to Juneau and lodging there for Mr. Josephson was paid by another client, British Petroleum Company. Unlike many other state medical associations ASMA did not have to make a special assessment on membership.

Some physicians continue to feel that since all 26 recommendations of the commission did not survive that the ASMA should not have gone on trying to improve a truncated package. The malpractice committee did in fact go beyond its instructions from the Council in January and February and from the explicit desires of the component societies in their winter endorsements of the commission proposals. The legislative committee has traditionally been given authority to do this since moment by moment pulses of the scattered membership cannot be taken during the legislature. The malpractice committee assumed that it had this authority, too, since this was legislation. It will be for members to decide individually or collectively whether or not in the final analysis the committee exceeded its authority or worked against the best interest of the majority.

Particularly galling to many physicians is mandatory insurance. Especially vocal in Anchorage about this were Stover, Sayer, von Hippel, Compton, Fish, and Dittrich. A motion by Fish at a February 10 meeting the AMS that mandatory insurance as an isolated concept was undesirably passed with only one dissenting vote, but the AMS stopped short of withdrawing its support of the commission package which, of course, included mandatory insurance. The AMS had its seventh special meeting within a year on May 27 the night before the Governor was to sign the bill. Features were explained for the umpteenth time, displeasures expressed, and a motion made by Dittrich to send a telegram to the Governor asking him to veto the bill. The motion was defeated 23-8. A second motion to appoint a committee to critique the bill passed unanimously.

It took 16 months to get a law. In this time perceptions of 320 physicians as to the cause of the problem and its correction changed, well, not 320 times, but many times. In the meantime many points of no return — points of commitment and decision — came. The bill simply could not be re-written every week or even every month. During this process many physicians — 18% according to an ASMA poll in late April 1976 — came to believe fervently that possessing malpractice insurance itself was the problem and that transferring assets to wife or children was a shield against suits, forgetting perhaps that the incidence of divorce is far greater than the incidence of large malpractice awards. Others pointed out that sooner or later a trial lawyer would make example of a physician who chooses to "go bare" and that his ingenuity in pursuing the judgment down the years would know no bounds.

So HB 574 is law. No one is completely satisfied though some legislators crow that it is the best in the country. It is not. But it could be peculiarly suited to needs here. It may stabilize practice for a few years allowing us to practice up to our technical competence until the tide of suing for personal injury turns, as it surely must, when everyone realizes how shredding to social fabric such behavior is. Suits then will become taboo. Taboos are stronger than laws.

In summary, Seasion Law 102, commits the state to the public policy that physicians and hospitals must be insured on an occurrence basis against their negligent professional acts. It commits, *pari passu*, the state to provide such insurance with premiums based on Alaskan experience by a mechanism that goes far beyond what other states do with their simple, back-up JUA mechanisms. It further orders the state through the MIC to enter the touchy but important area of risk management within hospitals. It assures, over strenuous objections of the court system, that physicians get first crack, whenever a claim is filed, in explaining the biology of the matter.

Will it work? It reduces simply to this: if the number and size of awards in Alaska remains low, the MIC will succeed; if frequency or awards escalate, it will surely fail. At that point the Legislature, which is committed to watch the fledgling public company, will probably take further drastic steps to control the problem. It is distinctly possible that "socialization" of reparations to injured patients would be a part of such revision of the law. The commission touched this principle in proposing the late-claims fund and the Legislature approached it in moments when it pondered an appropriation to get the MIC started. At that point separation of reparations to patients and penalties on providers might come. Until then we pay every dollar of reparation. There is an annual penalty. It is called a premium.

NORTHERN HIGHLIGHTS - 24
SELECTED ABSTRACTS ON MEDICINE AND PUBLIC HEALTH IN THE NORTH

Animal-borne Diseases

Peterson, D. R.; Cooney, M. K.; Beasley, R. P.

Prevalence of antibody to *Toxoplasma* among Alaska Natives: Relation to exposure to the Felidae. *J. Infect. Dis. 130:* 557-563, 1974.

This paper attempts to relate the prevalence of *T. gondii* antibodies in the residents of Alaskan villages to the use of Native foods or to the exposure to domestic cats. The authors are associated with the School of Public Health and Community Medicine, University of Washington.

The study is based upon the testing of serum samples collected from large numbers of villagers in the course of other investigations dating back as far as 1962. A total of 1,188 specimens came from Fort Yukon, from a group of villages on the northwest coast, and from a few communities in southeast Alaska. Another 384 samples came from Mt. Edgecumbe high school students from all over Alaska.

Specimens were tested in dilutions of 1:16 by the Virgo Reagents IFA Test for Toxoplasmosis kits. All positive sera were then titrated to the antibody end point by the IHA test.

A substantial number of individuals tested were positive by either method of antibody detection. By IFA, the rates ranged from a low of 4.6% (Fort Yukon women) to a high of 62.8% (Angoon males). IHA rates were generally parallel to but lower than IFA rates.

Prevalence of antibody increased directly with age and there was very little difference between the sexes. The overall prevalence by the IFA test was 27.9% compared with 16.4% by the IHA test. The highest prevalence rates (IFA), standardized by age and sex, came from St. Lawrence Island and southeast Alaska. Domestic cats were found to be quite prevalent in all parts of Alaska.

The subgroup of sera from Mt. Edgecumbe students permitted a comparison of antibody prevalence by ethnic group. By the IHA method, the prevalence among Tlingits was nearly twice that of other populations. The students from the Pribilof Islands, where cats abound, had a rate of 22.9% by the IHA method, compared to 5.6% among the rest of the Aleut group. Because of small numbers, this difference was not statistically significant, however.

Cuthbert, R.

Sylvatic pulmonary hydatid disease. A radiologic survey. *J. Assoc. Canad. d. Radiologistes. 26:* 132-138, 1975.

This paper presents the results of radiologic study of 75 proved hydatid cysts of the lung which were identified among individuals living in northern Canada. The author is with the Department of Radiology at the U. of Alberta Hospital in Edmonton.

The cases were all seen at the University Hospital between 1949 and 1972. The sample included 55 Indians, five Eskimos, and four Caucasians. The ages of the 33 males ranged from 3-63 years with a median of 12. The ages of the 31 females ranged from 5-68, with a median of 14.

Of the 75 cysts identified, all were located in the lung parenchyma near a pleural surface. Forty-three were in the right lung and 32 on the left. Upper lobes predominated on the right side, whereas basal sites were more common in the left lung. Fifty-one cysts were classified as unruptured and 24 as ruptured on the basis of radiographic criteria. Six patients had more than one cyst and one patient had a total of five.

The unruptured cyst was found to have distinct radiographic features, such as homogenous density, a well-defined border, a flat indented or notched edge, and no visible calcification (despite the fact that several cysts contained calcium on histological study). The ruptured cysts showed signs described as "crescent," "double arch," and "water lily" and often demonstrated cavitation, or the characteristics of an abscess. Interstitial pneumonitis was thought to be due to the irritant nature of the cyst fluid.

The Casoni test was found to be positive in 23/28 unruptured cysts and 20/23 ruptured cysts.

Miller, L. G.

Further studies on tularemia in Alaska: human tularemia. *Can. J. Microbiol. 20:* 1539-1544, 1974.

This paper presents the results of serological investigation on tularemia among Alaska Natives of the Bethel area and the east central part of the state. A clinical report of a confirmed case in a Caucasian laboratory worker is also described. The author is with the Division of Quality and Standards of the Public Health Service in Dallas, Texas.

Serological specimens originally drawn for other purposes were made available from residents of various villages in the Bethel and Tok areas. Screening tests, followed by determinations of quantitative titers, when appropriate, were performed by the tube agglutination method using commercial antigens. The overall prevalence of antibodies was 6.9% in east-central Alaska, compared with 3.6% in southwestern Alaska. All the latter villages had persons with positive titers, whereas only residents of Northway and Tetlin were positive in the east.

Fifty percent of the positive sera from Northway came from persons born after 1939, while in the Bethel area 86.7% of positive titers were from individuals born before 1940. Two seroconversions were detected in Northway — in a girl of 17 and in a boy of eight. No definitive clinical illness could be recalled except for a rash in the girl. No evidence of recent infection could be confirmed among the Eskimo population tested.

A 42-year-old Caucasian laboratory worker developed clinical pneumonic tularemia which was unrecognized for 35 days. The diagnosis was finally confirmed by isolation of the organism from pleural fluid obtained on the 34th day and from a rise of antibody titer from 1:40 to 1:640. The illness was characterized by low grade fever, pharyngitis, headache, myalgia, sweats, pleuritic chest pain, nonproductive cough, and ultimately a pleural effusion. This is the first Alaskan case to be bacteriologically proven.

An active focus of tularemia is felt to be still present in the Northway area. The absence of clinical cases among the Natives might be explained by (1) an avirulent strain, (2) asymptomatic disease (due to natural resistance?), (3) misdiagnosis. The most probable routes of infection would be through the ingestion of contaminated meat or water, insect bites, or cuts from skinning infected animals. Physicians should continue to be alert for cases of this disease.

Miller, L. G.

Further studies on tularemia in Alaska: virulence and biochemical characteristics of indigenous strains. *Can. J. Microbiol. 20:* 1585-90, 1974.

This paper reports the results of investigations carried out on two Alaskan strains of *Francisella tularensis.* The author was with the Arctic Health Research Center in Fairbanks.

A strain of *F. tularensis* was isolated from hares shot or trapped in the Fairbanks area in 1971. The organism was recovered from the liver and spleen of one and from 7/24 tick-pools from the animals. The strain was found to be fully virulent for the varying hare, domestic rabbit, guinea pig, and white mouse, all of which were fatally infected by less than 10 microorganisms. It was also the cause of a serious human illness in a laboratory worker. A rodent strain, originally recovered from a vole from the Alaska Peninsula in 1969, did not kill hares or guinea pigs inoculated with 10^8 or 10^4 microorganisms respectively.

The hare strain was able to metabolize both glycerol and citrulline, unlike the rodent strain.

The virulence and the biochemical differences in these two strains confirm that at least two forms of tularemia occur in Alaska. The hare strain is probably that designated *F. tularensis nearctica* (Olsufiev) and the rodent strain *F. tularensis holarctica.*

Neiland, K. A.

Further observations on rangiferine brucellosis in Alaskan carnivores. *J. Wildlife Dis. 11:* 45-53, 1975.

This paper reports observations on the apparent spread of *Brucella suis* type 4 from the Arctic caribou herd to its predators. The author is with the Alaska Department of Fish and Game in Fairbanks.

Sled dogs from villages associated with the Arctic caribou herd were found to be commonly infected, although dogs from two villages in close contact with the Porcupine herd were not. Wolves and red foxes were also infected, probably reflecting their use of caribou as a major item of diet.

Nearly 90% of 37 grizzly bears from the Brooks Range showed serologic signs of infection, this being the first reported evidence of natural *Brucella* infection in bears.

There is some reason to believe that natural infection with *Brucella* in these carnivorous species may interfere with reproduction but this matter needs further study.

Wagner, R. J.; deJong, C.; Leung, M. K.; McLintock, J.; Iversen, J. O.

Isolations of California encephalitis virus from tundra mosquitoes. *Can. J. Microbiol. 21:*574-576, 1975.

This paper describes the isolation of arboviruses of the CE group from mosquito pools collected in the tundra region of the Keewatin District in Northern Canada. The authors are with the Western College of Veterinary Medicine, University of Saskatchewan.

The present work was undertaken in the treeless coastal region of east-central Keewatin in July 1973. Four viral isolates, later identified as members of the CE complex of arboviruses, were recovered from 151 pools of the *Aedes hexodontus-punctor* group of mosquitoes. This is the first time that the California encephalitis viruses have been recovered from mosquitoes in the tundra biome, although they are well known from the boreal forests.

The problem of virus overwintering in this area has not been completely elucidated, but transovarial passage in the mosquito is possible, or perhaps the virus may overwinter in lemmings, migratory caribou, or the hibernating arctic ground squirrel.

–Robert Fortuine, M.D.

Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct nontherapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

Pharmaceutical Manufacturers
Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005

LETTER TO THE EDITOR

Dear Sir:

I would like to submit the following letter to the editor. This letter is written tongue in cheek from the standpoint of a plaintiff's malpractice attorney. I would hope that you could print it with such a format.

A "Plaintiff's Attorney" writes:

Dear Dr. Kottra:

I would like to take this opportunity to thank my many good friends in the medical profession who share my concern with the quality of medical care in this state and who share my dedication to transforming medical care through malpractice litigation.

You know, it's really interesting to follow the changes that have occurred in the philosophy of the staff at Providence Hospital. Here is a group of private practitioners, believed by themselves to be top-notch, who have enough political clout to control medicine throughout the state, and set an example for the entire country.

We plaintiff's attorneys were really astounded when, in the summer of 1975, the surgeons at Providence essentially went on strike. We could barely suppress our giggles when doctors made public announcements that they couldn't practice without malpractice insurance. I for one was then convinced that physicians, in spite of their paranoia about lawsuits, had finally realized that it is the plaintiff's malpractice attorney, not the physician, the hospital nor the AMA who has been responsible for the tremendous improvement in medical care that has occurred in our lifetime. Of course, if the doctors ever did anything so irresponsible as to go without malpractice insurance, patients would be taking their lives in their hands simply going to a doctor. Lawyers just aren't able to spend valuable time suing doctors who have no insurance, much as the patients may need this protection.

Of course, we all really applauded the work of the Governor's Malpractice Insurance Commission. The Commission quickly got down to specifics, such as rules of evidence, definitions of informed consent, etc., none of which is really of any significance to plaintiff's attorneys who have a good case (and believe me, we have lots of them!). The real coup, I believe, was in the first week of the hearings, when the commission put so much emphasis on specific points of law that the basic Number One Concept of malpractice litigation slipped right by the doctors without even a blink from them! For those of your colleagues who haven't yet seen the light, this concept states "A responsible physician must be liable for malpractice far in excess of his personal financial means."

By the way, we attorneys would like to have credit for that concept, but the credit lies with the physicians. As the doctors have insisted on larger and larger insurance limits to protect their assets, judgments have naturally gone higher and higher.

We did have some wonderment about the one-million-dollar limit on the insurance, since a number of us have several cases in the works which will hopefully yield judgments of over a million.

But all our doubts and hesitations were blown away with the wind when our friends in Juneau made the insurance mandatory, and the doctors, although grousing a bit, did not revolt as they might have were they less responsible.

But now we really have it. A state law that all physicians MUST have malpractice insurance. Now every patient in the state will be protected by knowing that an attorney is eagerly waiting in the wings to assure he has the best care, or else. The attorney finally assumes his rightful place on the health care team.

Of course, the insurance premiums will become very expensive. But as I myself see it, we are really doing away with malpractice. Now all patients will be indirectly paying a malpractice premium every time they are served by a physician, but actually this is insurance that they have a good result.

The entire country has been looking to Alaska for guidance in this crisis. Our landmark legislation will be of great influence elsewhere and I only hope that the legal profession has the manpower to deal with this evolutionary change.

See you in court,

W. Campbell Compton, Esq.

Ed. note: Dr. Compton is in private practice in Anchorage, specializing in Ob-Gyn. Most importantly, he is the co-parent of Steve Compton, Alaska State Spelling Champion.

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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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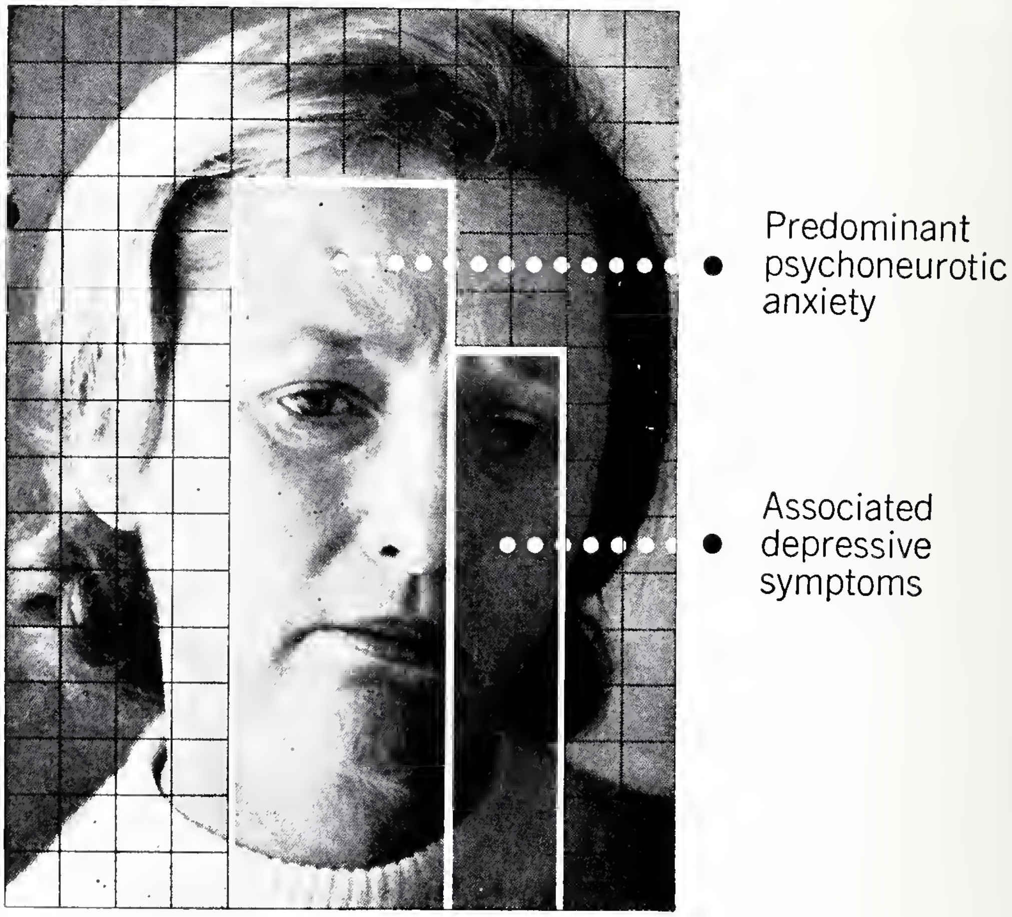
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Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

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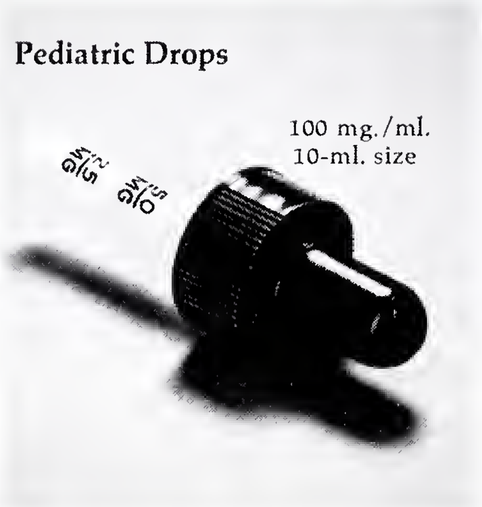

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THE CURRENT MANAGEMENT OF MALIGNANCY — V

TUMORS OF THE GASTROINTESTINAL TRACT

Frank J. Panettiere, M.D., F.A.C.P.

ADENOCARCINOMA OF THE LARGE INTESTINE

Large bowel cancer is the most common serious malignancy in the United States today. Although in women it is second in frequency to breast cancer, and in men it is second to lung cancer, when we include all people irrespective of sex, then cancer of the large bowel holds the undisputed first place. It has been well recognized for over a dozen years that 5-Fluorouracil offers modest but definite efficacy in the management of these tumors[1]. Although there are data demonstrating that 5-FU can be given by mouth with evidence of antitumor effect[2, 3], nevertheless, recent data demonstrate that oral absorption is erratic and undependable. Therefore, although in practice some patients will have tumor regressions because of absorption by mouth, nevertheless, in any individual case the physician does not know whether his particular patient will receive any benefit at all from the drug administered by this route. However, when it is absorbed by mouth, there is extensive enterohepatic recirculation of the drug so that the liver and biliary tree experience higher concentrations of this particular drug than would be the situation with the standard intravenous route of administration.

In recent years, a group of anticancer drugs known as nitrosoureas has been extensively studies in many research centers worldwide. Although other drugs of this group show only minimal effectiveness in the management of gastrointestinal cancer, one of them, namely Methyl CCNU, shows unquestioned efficacy and seems to be equal to 5-FU in the management of cancer of the large intestine[4]. This particular drug is given orally, since there is as of today no reliable parenteral formulation. Its effect is so prolonged that a single oral dose every six to eight weeks is the usual regimen of administration. When 5-FU is combined with methyl CCNU in the management of gastrointestinal cancers, the two drug combination is more than twice as likely as either drug alone to cause significant shrinkage of tumor[5]. Because this two drug combination is so superior to either drug alone, and even somewhat superior to what one would expect from just adding the effectiveness of the two drugs together, it is today the standard way of treating such tumors in most medical centers. (Although the drug methyl CCNU is not commercially available at the time of this writing, it may well be available by the time this article is published.)

The discussion of the chemotherapy of disseminated disease now leads us back to the initial management of the tumor. There is no new "breakthrough" in surgical technique to remove the tumor. The basic problem remains in the situation where, despite an attempted "cura-

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The first article of this series, on cancer of the breast, appeared on pages 114-116 of the September 1973 issue; the second article, discussing Hodgkin's Disease, appeared on pages 7-11 of January 1974 issue; the third article, a discussion of lymphoproliferative disorders and leukemias, appeared on pages 89-92 of the July 1974 issue; the fourth article of this series, pertaining to cancer of the lung, appeared on pages 35-41 of the May 1975 issue.

Dr. Panettiere, former chairman of the Department of Medicine, USAF Hospital at Elmendorf Air Force Base is a full member of such organizations as the Southwest Oncology Group, the American Society of Clinical Oncology, and the American Association for Cancer Research. His current address is at the Division of Hematology-Oncology, The University of Texas Medical Branch, Galveston, Texas 77550.

tive resection," there is pathologic involvement of the serosa and/or adjacent regional nodes. All too often new tumor implants soon develop and clinical relapse occurs within a few years. Only about one-third of such patients who had initially been treated with a "curative resection" do not die of recurrent and disseminated disease within the next very few years [6]. For this reason, a number of attempts have been made to supplement curative surgery in patients with serosal or nodal involvement by means of prophylactic, or adjuvant, chemotherapy or immunotherapy. One such study [7] indicates that 30 months after patients were started on such a program, there appeared to be less evidence of recurrent tumor than has been the case with previous historical controls. This study, like many such studies, suffers from the small number of patients followed for a meaningful length of time as well as from the question of applicability of a previous historical control. In any case, in that particular study, the 5-FU was given by the oral route, which we appreciate is not very reliable. One must ask the question whether intravenous 5-FU, especially when combined with methyl CCNU, might not be significantly more effective. Although currently over 100 patients have been entered on my nationwide cooperative protocol to test the effectiveness of this two drug combination, with or without supplementary immunotherapy; nevertheless, it is too early to make a meaningful comment on the eventual effectiveness of such therapy. Therefore, although at the present time I feel that it should logically be beneficial, I could not dogmatically recommend today such adjuvant therapy as the best way to treat these patients.

RECTAL ADENOCARCINOMA

Carcinoma of the rectum is somewhat of a different situation compared with carcinoma elsewhere in the large intestine, in that rectal tumors tend to be significantly more malignant. It has been shown that 25 to 50 per cent of those not cured by the surgeon die from local recurrence [8]. These authors reported on a randomized study conducted by the Veterans Administration Surgical Adjuvant Group wherein low-dose preoperative radiotherapy was given. They found that in patients who subsequently underwent abdominoperineal resections, the incidence of positive lymph nodes was 26.5 per cent compared to the 43.7 per cent incidence in the control group which had not received previous radiotherapy. This interesting finding translates into an improved five-year survival of 40.4 per cent compared to the 27.5 per cent five-year survival rate the control group enjoyed. This observation has recently been confirmed by the Oregon group which reported an increase in five-year survival from 38 per cent to 53 per cent [9]. Because of such reports, one would recommend today that if a patient has a low-lying rectal lesion, histologically proven at proctoscopy, then preoperative radiotherapy should be given with the expectation that it could well shrink the tumor enough to make surgery simpler, as well as make it more likely that permanent local control of the tumor and eventual chance of survival will be increased. If a patient is so treated with preoperative radiotherapy followed by abdominoperineal resection, the surgical procedure should be accomplished approximately four to six weeks following the completion of radiotherapy. This is because, prior to four weeks after the completion of radiotherapy, hyperemia in the irradiated tissues would make surgery more hazardous. Surgery should not be delayed beyond six weeks after the completion of radiotherapy, because after this point progressive fibrosis would similarly make surgery unnecessarily difficult and hazardous. It is uncertain today whether supplemental adjuvant chemotherapy might add anything to the radiotherapy effect.

ADENOCARCINOMA OF THE STOMACH

Although cancer of the stomach, when it has disseminated, has traditionally been treated with the same drugs as cancer of the large intestine, more recent data demonstrate that there are important differences in the spectrum of drug effectiveness throughout the entire gastrointestinal tract. An important example of this is the drug Adriamycin which causes objective shrinkage of large bowel cancer less than 10 per cent of the time but causes significant objective responses in approximately one-third of the gastric adenocarcinomas of patients so treated [10]. An additional agent, which has been used very extensively in Japan and only somewhat less so in the United States, and, which has shown unquestioned efficacy in gastric adenocarcinoma, is the drug Mitomycin C [11, 12]. Recently, the combination of the three best drugs, namely Adriamycin, 5-FU, and Mitomycin C, was administered together once every eight weeks to 18 patients with gastric carcinoma. Nine of these achieved significant shrinkage of their tumors with a median duration of such response lasting in excess of eight months [13]. Although a 50 per cent response rate for this particular tumor is quite exciting, nevertheless, only 18 patients were so treated and therefore one must await confirmation in larger numbers of patients before recommending this as the treatment of choice for this form of malignancy.

LIVER CARCINOMA

As far as primary and metastatic tumors in the liver are concerned, a form of therapy which often gives prompt relief of symptoms lasting several months involves hepatic artery perfusion chemotherapy. Generally, the hepatic artery catheter is inserted percutaneously, although such a catheter could be inserted under direct vision by a surgeon during intra-abdominal surgery. The chemotherapy utilized most commonly is 5-Fluorouracil. It is administered by means of a very slow drip 24 hours a day for a total of about seven to 10 consecutive days. Commonly, the initial dose is in the range of 15 to 20 mg/kg of body weight for the first three or four days, following which the dose is decreased to the range of 10 to 15 mg per 24-hour period during the last several days of the infusion. These doses are far in excess of those which would be clinically tolerable if administered by rapid injection into any blood vessel. However, the very slow continuous perfusion into the hepatic artery seems to result in the great majority of the drug being utilized in the liver so that only very small amounts ever reach the systemic circulation where it might cause gastrointestinal or bone marrow toxicity. At the termination of hepatic artery perfusion, the catheter is removed, although the procedure can be repeated subsequently, if needed.

For the systemic chemotherapy of hepatocellular carcinoma, generally 5-FU, alone or in various combinations, has been employed. Recently there have been reports from Africa as to the effectiveness of Adriamycin to treat primary liver cancers. When one compares the African patients with those in the United States, we see that Americans tend to have a lower response rate, in the range of 25 per cent[14]. A significant problem with the administration of Adriamycin in patients with primary liver cancer is the fact that the liver is the primary source of excretion of this particular drug. Therefore, the patient who has abnormal liver function tests should have the dose of Adriamycin significantly decreased so as to prevent severe life-threatening bone marrow and gastrointestinal tract toxicity.

CARCINOMA OF THE PANCREAS

Even though cancer of the pancreas is the fourth leading cause of cancer death in the United States, we have not yet developed optimal therapy for it and, as a result, the median survival seems to be in the range of six months[15]. These results are poor enough to make one consider adjuvant therapy as a supplement for surgery. Such adjuvant therapy can take the form of chemotherapy or radiotherapy. As far as chemotherapy is concerned, extensive data indicate that when the drug 5-FU is used by itself, significant objective shrinkage of this tumor is observed about 15 per cent of the time. When 5-FU plus BCNU are used together, several studies have shown an increased response rate to the range of 26 per cent to 33 per cent, with median durations lasting in two different studies between 5.5 and 11 months[16, 17]. More recent data indicate that methyl CCNU is at least equivalent to and perhaps superior to BCNU when combined with 5-FU to treat patients with cancer of the pancreas. Studies are underway to test this.

Although there has been a good deal of question in the literature as to the effectiveness of radiotherapy in the treatment of patients with carcinoma of the pancreas, it does seem to be useful. One group reported that 17 of 22 patients had significant palliation of pain when given doses as low as 600 rads up to as high as 5,000 rads with an average tumor dose for a favorable response being 1,440 rads in 14 days[18]. The combination of chemotherapy plus radiotherapy seems even more encouraging. The Mayo Clinic group reported a significantly increased duration of median survival when high-dose 5-FU was given as a brief course in addition to 3,500 rads of pancreatic irradiation[19]. There is even an autopsy study which demonstrated that radiotherapy preceding long-term 5-Fluorouracil therapy, following palliative surgery can lead to an almost complete destruction of the primary tumor. One of their patients was still alive and free of recurrent disease (confirmed by a second-look operative procedure) after 37 months[20]. There is one further report on the combination of radiotherapy plus 5-FU chemotherapy to treat unresectable pancreatic adenocarcinoma. This group[21] reported a median survival of approximately eight months with 21 per cent of their patients being alive two and a half years following the use of radiotherapy to the tumor bed. The data are much more exciting when one realizes that six of the 29 patients they treated had advanced, non-localized, disease such that radiation therapy could never have been any more than palliative. Therefore, one might suggest today that the patient found to have adenocarcinoma of the pancreas should be treated with a combination of whatever surgical resection is possible followed by radiotherapy and chemotherapy.

CARCINOMA OF THE ESOPHAGUS

The major modalities of therapy today for carcinoma of the esophagus are surgery and radiotherapy. Chemotherapy drugs such as 5-Fluorouracil, Bleomycin, and Adriamycin seem to offer only a minimal benefit in the management of this form of malignancy, although better schedules and dosages of administration are being developed. Usually, the most important problem in palliation of these patients is due to esophageal obstruction by tumor. Although a feeding gastrostomy is frequently used, and does serve to maintain nutrition, it does not attack the very distressing problem of handling salivary secretions. An endoscopically-placed tube, inserted through the tumor area, may often function as a useful conduit for this purpose.

CONCLUSION

Perhaps more than any other forms of malignancy, gastrointestinal carcinomas demonstrate the value of the multidisciplinary approach to cancer. As this article demonstrates, there have been a number of recent advances in the therapy of patients with these problems. But almost all of these have resulted from a coordinated therapy approach with the patient's problems handled in a team fashion by the surgeon, the radiotherapist and the medical oncologist.

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GONORRHEA CONTROL IN ALASKA

Mickey Eisenberg, M.D.

The medical profession can point with pride to the reduction in cases of tuberculosis, enteric diseases, measles, rubella, and other communicable diseases. There is one disease, however, in which Alaska is not so fortunate. In 1975, Alaska had the highest gonorrhea rate in the nation: 979 cases per 100,000 population. This figure is over twice the national average of 447 per 100,000. Reported cases of gonorrhea in Alaska have steadily increased since 1965 (Figure 1). In this paper I would like to briefly characterize this epidemic and discuss possible methods of control.

Gonorrhea occurs with high frequency in all areas of Alaska and is not confined to any ethnic group. For those 15-24 years of age, the most sexually active group, the annual incidence is 2,500 per 100,000 or 2.5 per cent. Our knowledge of gonorrhea is far from complete, and many gaps exist in our understanding of the clinical and epidemiologic aspects of the disease. It is increasingly apparent, however, that a combination of social, clinical, and epidemiologic factors contribute to the high incidence. Figure 2 presents schematically the cycle of gonorrhea transmission and is meant to illustrate the complex interaction of these factors. The many transmission points suggest possible measures with which to interrupt the cycle. Conversely, the complex cycle shows how mistakes in diagnosis and therapy, or inadequate surveillance, can contribute to the increasing incidence.

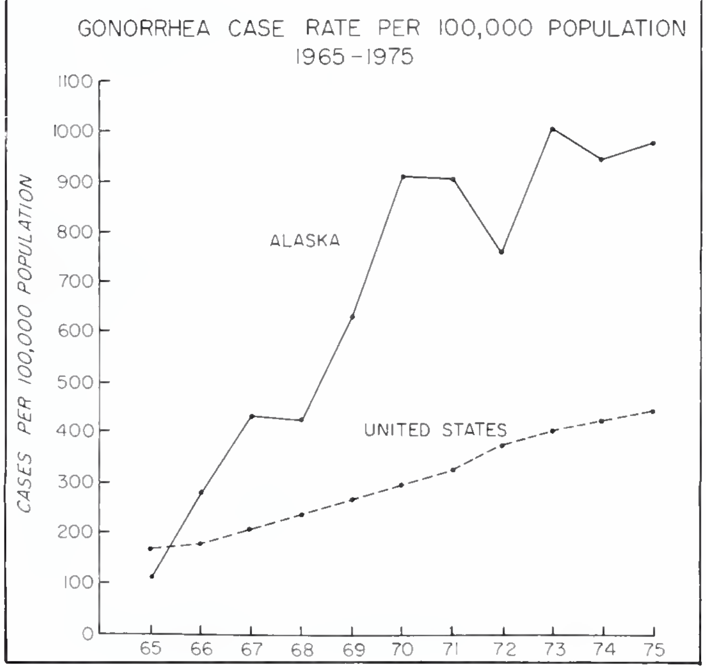
In this paper I will elaborate on some of the social, clinical, and epidemiologic factors contributing to gonorrhea transmission. I will also discuss what is currently being done and what could be done to control the disease in Alaska.

SOCIOLOGIC FACTORS

Of those factors contributing to the epidemic, sociologic ones are the least understood and most difficult to quantitate. It is widely believed that gonorrhea is a social disease and that the epidemic has resulted from changing sexual mores. In part this explanation may be true, but I believe it to be overly simplistic and often an excuse for inaction. Considerable social stigma is attached to the disease by the medical community as well as the public. Until the disease can be handled as objectively as any other illness, control will be considerably impeded.

Figure 1

GONORRHEA CASE RATE PER 100,000 POPULATION
1965 - 1975



What is Being Done?

Most of the current efforts have been directed toward educating high school students. The

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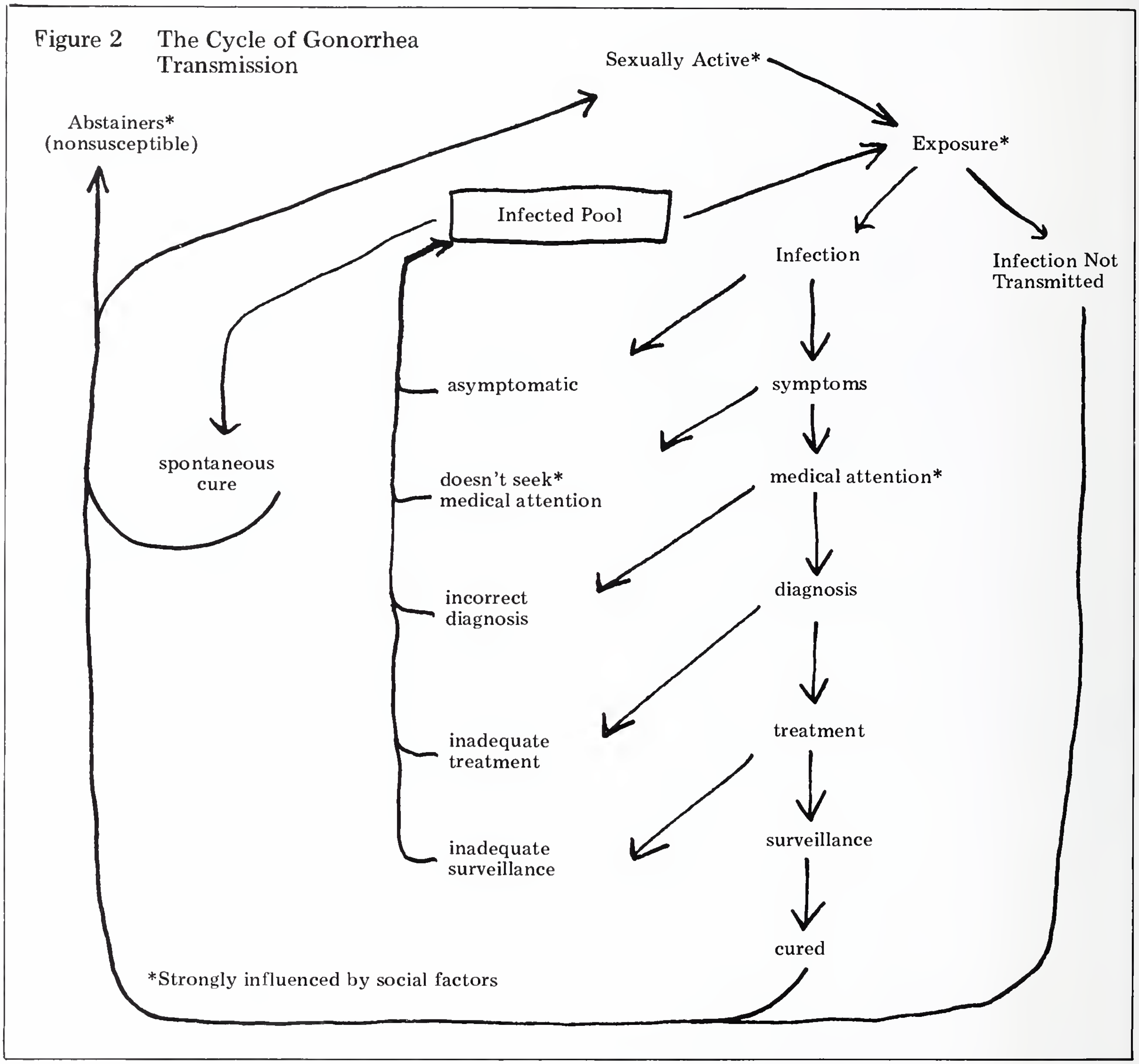
state has an active program of venereal disease instruction with educational aids and a teacher's manual.

What Could Be Done?

The problem of motivating people to do "what's good for them" is obviously fraught with moral difficulties. People have to decide for themselves "what's good." Nevertheless, the health department should function as an advocate for the public, providing them with necessary information so that appropriate decisions can be made. The public should know, for example, that gonorrhea morbidity is more severe in women. Pelvic inflammatory disease (PID) and subsequent sterility occur with relatively high frequency following gonococcal cervicitis. On the other hand, the incidence of gonorrhea epididymitis or prostatitis is low, and residual morbidity is uncommon. It is estimated that 17 per cent of women with gonorrhea develop PID and that 30 per cent of these women may become sterile or have ectopic pregnancies. Such data suggest that 30,000 to 80,000 women are sterilized annually in the United States as a result of the disease.[3] This situation is a human tragedy, one which I do not believe most young women appreciate. Women's groups could have much success with gonorrhea education, as much as they have had with the

(Continued on Page 70)

Figure 2 The Cycle of Gonorrhea Transmission



*Strongly influenced by social factors

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

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issues of abortion, rape prevention, and equal rights. The health department could provide the background expertise and advocacy for such an effort.

CLINICAL FACTORS

Clinical factors include proper diagnosis and treatment as well as prophylaxis and vaccine-induced immunity. A serologic test is available. It does not, however, distinguish recent from past infection, and its clinical usefulness is limited.[4]

The use of prophylactic agents is controversial and few comparative studies with adequate controls have been done. Any prophylactic regimen has the obvious problem of user acceptance whether it be a mechanical barrier (condom, diaphragm), a local agent, or a systemic antibiotic. Furthermore, the widespread use of antibiotic tablets has been discouraged because: 1) no single preparation protects against all sexually transmitted diseases; 2) there is a risk of sensitization and allergic reactions; 3) resistant strains may develop; and 4) adequate prophylactic dosages have not been determined.[5]

Unfortunately, despite much effort, an effective vaccine has not been developed. Furthermore, even if one had been, it would probably be poorly received on a voluntary basis[2] and it is difficult to imagine mandatory vaccination. Even with the more socially acceptable diseases, such as measles and diphtheria, population immunity levels are poor.

What Is Being Done?

Efforts in Alaska have been aimed primarily at enabling physicians to make the diagnosis, to treat adequately, and to monitor for resistant strains. In Anchorage, for instance, a culture-screening program has existed since 1972, through which private physicians are offered free culture material for gonorrhea screening. In addition, the Alaska Native Medical Center and clinics at Elmendorf and Fort Richardson military bases have participated.

A new culturing method (Jembec) already implemented in Valdez, Kodiak, Bethel, and Kenai, has been suggested for pipeline camps. This method, similar in sensitivity and specificity to traditional Thayer-Martin cultures, does not require sophisticated laboratory facilities and enables public health nurses and physicians' assistants to make a bacteriologic diagnosis on the spot. The cost of each culture is less than fifty cents.

In 1974, 200 of Alaska's physicians and public health nurses were interviewed to determine the adequacy of the treatment they were giving for gonorrhea. A surprising 44 per cent of the private physicians used inadequate therapy for male gonococcal urethritis, and 27 per cent used inadequate therapy for female gonococcal cervicitis.[6] Educational efforts to improve this situation have been undertaken.*

Last, several hundred cultures from Anchorage and Bethel were forwarded to the Center for Disease Control in Atlanta to determine antibiotic sensitivity. Fortunately, resistance to the accepted antibiotic dosages was not encountered.

What Could Be Done?

Accurate diagnosis is obviously important. The 1974 survey disclosed that several aspects of diagnosis are not widely known. The health department, in conjunction with the State Medical Association, needs to emphasize the following points:

1) Half of urethritis in men is NOT gonorrhea.
2) Gram stains of cervical discharges should not be used as an aid in the diagnosis of gonorrhea.
3) Cultures are unnecessary in men with a urethral discharge if gram staining reveals intracellular diplococci; a negative smear does not rule out the diagnosis.
4) A sexual preference and exposure history will indicate whether additional sites (rectum, throat) should be cultured.

The Jembec culturing program offers promise for accurate bacteriologic diagnosis in remote parts of the state. The State Laboratory, in cooperation with Native Health Corporations, could train village health aides in the technique, and physicians practicing in areas without a responsive lab could use the system in their offices.

EPIDEMIOLOGIC FACTORS

Gonorrhea never occurs in isolation. For every diagnosed patient there is always at least one other person with the disease. In recent years the role of homosexual transmission of the

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*The current therapy for gonorrhea, as recommended by the Public Health Service, Venereal Disease Control Branch, follows: (Therapy for men and women is the same.)

INTRAMUSCULAR	ORAL
1 g probenecid (orally) plus 4.8 million U procaine penicillin IM (2 locations)	1 g probenecid (orally) plus 3.5 g ampicillin (orally)
IN PENICILLIN-ALLERGIC PATIENTS	
Spectinomycin 2 g IM	Tetracycline 1.5 g (orally) followed by .5 g QID for 4 days (total of 9.5 g)

disease has begun to be appreciated. Frequently infection occurs in the pharnyx or rectum and is asymptomatic.

While much of the epidemiology of gonorrhea is understood, there are still large gaps in our knowledge. For example, we do not know why the southern and Pacific states (Alaska included) have the highest rates. Part of Alaska's high rate may be explained by increased disease reporting; however, no systematic attempt has been made on a nationwide level to determine the proportion of cases reported. The one survey of this problem did not validate the data with a chart review.[9] In Alaska, however, a statewide survey and chart review study estimated that 4,900 cases (versus the 2,900 reported) occurred over the 12-month period, June 1973-May 1974.

Recent information about repeat infections suggests that a small proportion of patients are responsible for a significant proportion of cases.[7] It also reveals that a "test of cure" obtained one week after therapy will reveal five per cent of patients infected (half of whom are felt to have treatment failures, the other half reinfections). Rescreening of patients four to six weeks after they have had a negative post-treatment follow-up culture will yield 20 per cent infected.[8] These data suggest that selective screening and rescreening efforts may be more productive than current screening efforts.

What Is Being Done?

Currently, gonorrhea is reported to the Section of Communicable Disease Control in Anchorage via a toll-free "hot line." All reports are confidential and the information is used to monitor trends in the disease as well as to identify communities with increased incidence. The reports are also useful in assuring treatment for named contacts located in different parts of the state from where the initial diagnosis is made. On a local level, most epidemiologic contact tracing is done by public health nurses or public health advisors.

What Could Be Done?

Treating a gonorrhea patient without attempting to treat his/her sexual partners is an exercise in futility, yet this is what usually occurs. The control of gonorrhea through contact tracing has not been successful in Alaska. The short incubation period precludes effective interruption of the disease since it often takes several days or weeks to reach a named contact. Furthermore, it is an impossible task for health departments or private physicians to trace contacts (even assuming all contacts are named).

A more logical, although unproven, approach might be to place the responsibility on the patient and to make the patient an ally in therapy. Every patient should receive some form of motivational counseling to encourage him/her to refer sexual partners for treatment. Special counseling should be directed toward those with repeat infections.

The barriers to private physicians' reporting of gonorrhea should be removed. The Department of Health and Social Services should work with the State Medical Association to devise a mutually acceptable method of reporting. Some private physicians prefer to "trace contacts" on an individual basis without revealing the name of the patient. They should understand, however, that data on secular trends are important to the success of control efforts. Perhaps the number, age, and sex of patients with gonorrhea could be reported monthly without their names being identified.

CONCLUSION

Some sociologic, clinical, and epidemiologic factors influencing gonorrhea control have been considered. We can improve culturing, assure adequate therapy, develop better methods of patient counseling, and even try to devise a vaccine or a better serologic test. All of these will help to retard the epidemic surge. Unfortunately, we do not understand what motivates people to be concerned about the disease and its complications and to take preventive action. In this regard, gonorrhea is no different from other public health problems such as alcoholism, drug abuse, accidents, emphysema, and lung cancer. I suspect that when enough people realize that gonorrhea can be emotionally and physically catastrophic, then rates will decline. Until that day, we should do what we can.

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MEDICINE BY SATELLITE TELEPHONE — A NEW BREAKTHROUGH

Robert Fortuine, M.D.

On the afternoon of July 14, 1976, a physician at the Alaska Native Medical Center in Anchorage talked with a physician on St. Paul Island and thus opened a new era in medical communications in Alaska. Both were using a simple telephone-like handset, and the voices were clear and natural at both ends. It was almost as if the other individual were in the same room instead of 800 miles away.

The voice from Anchorage, in fact, was transmitted by land line to the earth station at Talkeetna, beamed to a communications satellite far above the earth, and then retransmitted to the earth station on the Pribilofs.

This system developed from an agreement signed between RCA Alaska Communications, Inc., and the State of Alaska on July 11, 1975, providing for the installation of small earth stations in some 70 rural Alaskan communities. Though these stations were primarily for the purpose of making reliable commercial telephone service available, they had potential for other uses as well. Accordingly, the Alaska Area Native Health Service also contracted with RCA Alascom to install in those same villages a medical communications system which would tie them through a voice link with Alaska Native hospitals in the field and in Anchorage. This system, now partially in operation, has made all past medical communications systems obsolete. It is a significant step toward improving health in many of the remote areas of the State.

The use of radio for medical consultations in Alaska goes back at least a half century when the U.S. Army Signal Corps often assisted in passing messages from the remote parts of the Territory to the relatively few locations where physicians could be found. The military tradition carries on in our own day when the sophisticated communications systems of the Army, Navy, Air Force, Coast Guard, and National Guard are occasionally made available for medical emergencies involving the civilian population.

The direct ancestor of the present medical communications system, however, was not the Army Signal Corps but the Bureau of Indian Affairs, or Alaska Native Service.

Prior to 1955, this agency provided not only the educational program but also the medical services available to Alaska Natives in the outlying parts of the Territory. By the early 1940s, it had developed a network of HF radios, using government frequencies, in both schools and hospitals. Physicians held a regular "sched," usually in the evening hours, in which they would discuss the management of problem cases with the schoolteachers, who regularly handled health affairs in the village. Sometimes a single physician would take the "medical traffic" for the entire Territory at one sitting. As the number and complexity of problems increased, however, the traffic was regionalized to the various field hospitals, whose physicians held call at different times and on various frequencies.

This system continued to develop after the U.S. Public Health Service took over the health program for Alaska Natives in July 1955. Gradually the task of medical reporting fell to the village health aides, who were local Native men or women trained on the job by the teachers (who were usually glad to give up the job), and by itinerant physicians and public health nurses. Beginning in 1968 these aides received a regular course of formal instruction under the Community Health Aide Program in Anchorage and in

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the field hospitals.

The old HF system served long and generally well, although it had definite limitations. Not all villages had a BIA School, for example, and medical traffic then had to be handled through a State Operated School radio, a cannery radio, or an airline radio by the technique known as "cross-channeling." Ionospheric conditions often interfered with effective transmission and sometimes blocked out voices altogether, even for short distances. Another problem was complete lack of privacy, since nearly every family had a simple short wave receiver which could pick up the medical trafffic loud and clear.

The first real step forward was the installation of single-side-band HF radios in PHS hospitals and clinics beginning in 1969. Later these were also installed in village-owned clinics and other locations. This arrangement allowed the Health Aides for the first time to be independent of the school officials or others who had made their radios available for use. The single-side-band radios also allowed somewhat more privacy, since a special mechanism was necessary for another person to pick up transmissions clearly on a simple receiver.

Medical communications in Alaska entered the space age in the summer of 1971 when, through a contract between the National Library of Medicine and the University of Alaska, the Alaska Area Native Health Service was able to use the Applications Technology Satellite-1 (ATS-1), for medical traffic for several hours each day. Ground stations were located throughout the State but the emphasis for the program was the support of health care in Indian villages in the Interior, an area which was notable for the unreliability of conventional radio signals. Though limited in scope, the ATS-1 satellite program was highly successful and demonstrated that satellites had an important role in the future of Alaska communications.

For a brief nine-month interlude, beginning in the summer of 1974, a far more sophisticated medical communications experiment was undertaken in Alaska, using the so-called ATS-6 Satellite. This project, largely carried out by the Indian Health Service in cooperation with NASA, involved the use of two-way video as well as audio channels for the transmission of medical information. Ground stations were located at Tanana, Fairbanks, Galena, Fort Yukon, and Anchorage. The Physician's Assistant at Galena or the Nurse Practitioner at Fort Yukon could thus present cases visually to primary physicians at the Tanana Alaska Native Hospital, or to specialists at the Alaska Native Medical Center in Anchorage. This fascinating experiment in medical telecommunications was unfortunately cut short in May 1975 when the ATS-6 Satellite was moved to a location over India.

With the inauguration of the new RCA system, completely reliable two-way voice links will be possible on a 24-hour basis between the Alaska Native Hospitals throughout the State and ultimately some 110 village locations. As of this writing, the Alaska Native Medical Center has been in direct contact with 13 communities, from St. George Island in the south, to Mekoryuk in the west, to Anaktuvuk Pass in the north.

The system is unbelievably simple to operate. The equipment located in each hospital and village clinic, consists of a standard telephone handset equipped with a speaker instead of a dial. The console is furnished with a volume control and the handset with a push-to-talk lever. Each unit has five channels available, four for general use and one for private inter-hospital use only.

As with all Alaska medical communications systems, the lack of privacy poses some problems. Voice transmission between two stations may be monitored by all earth stations (clinics and hospitals) which are tuned to the appropriate channel, but may not be picked up by anyone else. On the special channel, voice transmissions will only be heard by the seven Alaska Native Hospitals, the health facilities on the Pribilof Islands, and two private hospitals, namely those at Kodiak and Nome.

The new system, however, promises to make 24-hour emergency medical consultation available on a reliable basis to some 70 communities, many for the first time. Those living in isolated villages — but most of all Health Aides and their patients — will, therefore, rest easier and find themselves no longer at the mercy of fog, wind, snow, darkness, and the ionosphere.

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◀ *OUR PHOTO: Norfolk & Western Branch Train No. 202 west bound near Alvarado, Va (Oct., 1956). This line reaches the highest point of any railroad East of the Rockies (elevation 3,577 ft.) with a minimum grade of 3%. It crosses 108 bridges, some 700 ft. long! Photo by O. Winston Link.*

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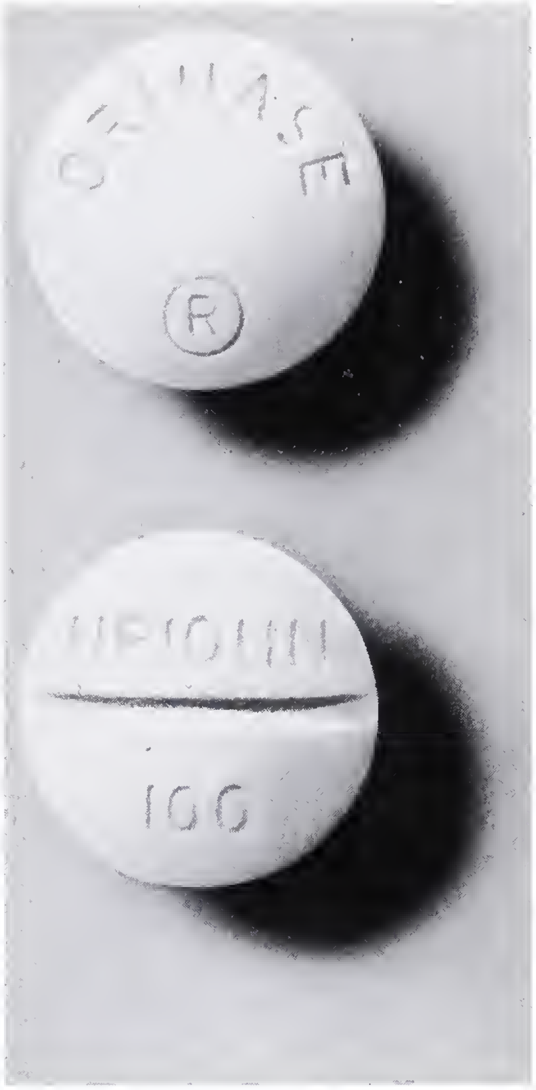

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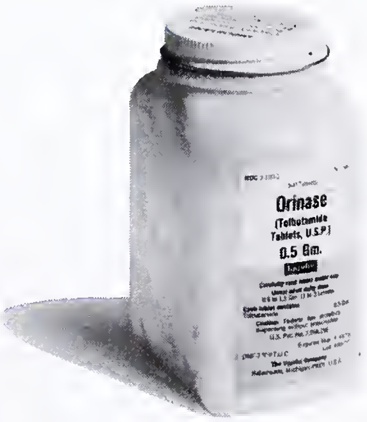

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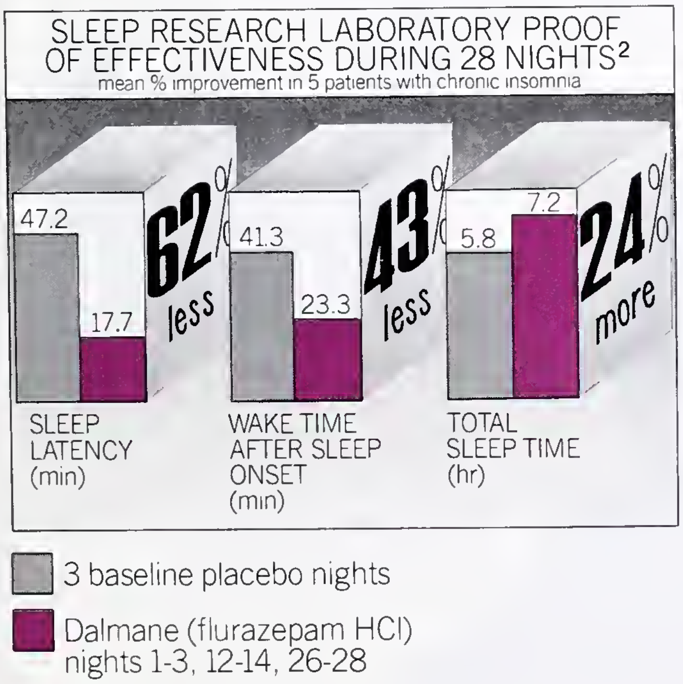
For insomnia that is a chronic problem...

Only Dalmane (flurazepam HCl) offers sleep laboratory proof of effectiveness for as long as 28 nights

Continued relief of insomnia in patients with chronic insomnia

Since insomnia is often transient and intermittent, the prolonged administration of a hypnotic is generally not necessary or recommended. But when insomnia is a chronic or recurring problem, continued effectiveness is as important as initial effectiveness. Results of a recently published sleep research laboratory study[1] demonstrated that, while pentobarbital lost effectiveness within two weeks, Dalmane maintained effectiveness for 28 consecutive nights. Similar 28-night results with Dalmane, displayed below, were obtained by a second sleep research group.[2] In previous studies,[3] both chloral hydrate and glutethimide began to lose effectiveness after several nights, while Dalmane maintained effectiveness throughout the 14 medication nights. Whether the problem is difficulty falling asleep, staying asleep or sleeping long enough, consider these results when selecting a sleep medication.



Patient benefits include relative safety, infrequent morning "hang-over"

Dalmane is well tolerated, seldom causing morning drowsiness or grogginess.[4] No increase in dosage is required for continued effectiveness from night to night.[1-3] Should Dalmane be used repeatedly, periodic blood counts and liver and kidney function tests should be performed. The usual adult dose is 30 mg *h.s.*, but 15 mg may suffice for some patients and is recommended as a starting dose for the elderly and debilitated to help preclude oversedation, dizziness or ataxia.

Continued relief of insomnia: One more good reason to specify

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.

whenever a hypnotic is needed

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Please see following page for a summary of product information.

New objective proof: continued insomnia relief without increasing dosage...[1,2]

Dalmane®
(flurazepam HCl) CIV

Objectively proved in the sleep research laboratory...

during 28 consecutive nights of administration:

- ☐ **effectiveness with a single 30-mg *h.s.* dose, maintained**
- ☐ **rapid sleep induction, maintained**
- ☐ **sleep for 7 to 8 hours, on average, maintained**
- ☐ **less time awake during the night, maintained**

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

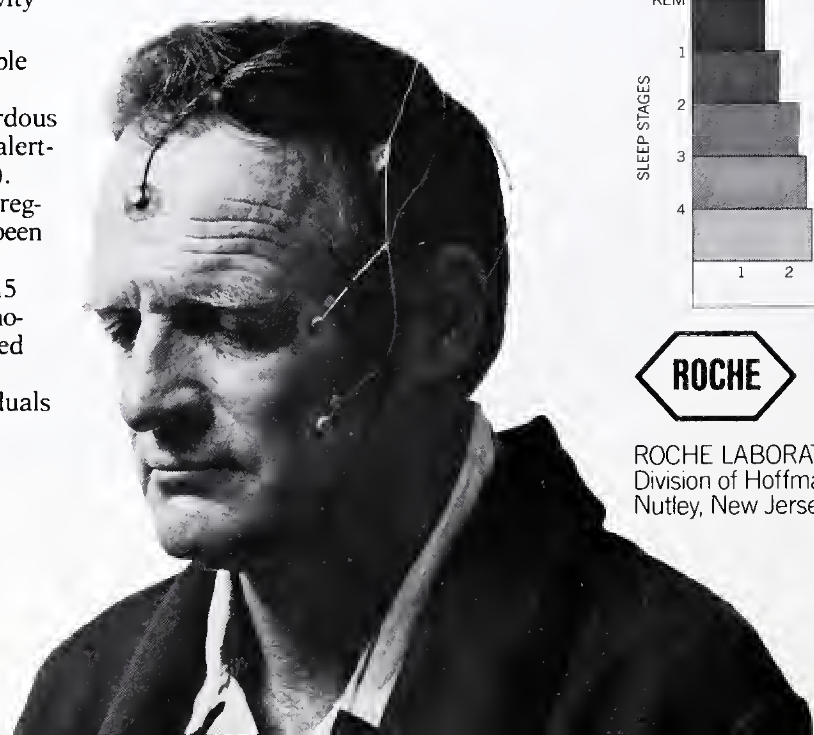
Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.



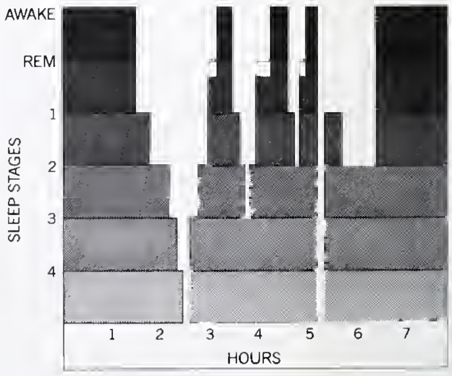
Dosage: Individualize for maximum beneficia effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

REFERENCES:

1. Kales A, *et al*: *Clin Pharmacol Ther 18*:356-363, Sep 1975
2. Dement WC, *et al*: Long-term effectiveness of flurazepam 30 mg *h.s.* on chronic insomniacs. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, Jun 30-Jul 4, 1975
3. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
4. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

For all common types of insomnia



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PRESIDENT'S PAGE

Robert D. Whaley, M.D.

The spectre of national health insurance has hung over the nation for a decade or more, but with the convenants of the Democratic platform and the result of the recent national polls at hand, some general federal health plan now seems likely to be legislated in this coming year. Those of us who may feel strongly regarding this development must use the next 6 to 9 months profitably if we expect to influence the course of events.

Observers of Governor Carter in Georgia must be impressed both with his commitment to the full availability of good health care universally, and also by his record of activism and effectiveness in past areas of endeavor where he has had such commitments. It would seem that any influence on federal legislation would be most effectively made through education of the local electorate and of their representatives, and that a nationwide effort should be mounted by the medical profession to this end. Since the Republican platform at the present time is expressly against national health insurance it may well be that the conflict of the presidential campaign in the next several months will provide a fine platform for the Education of the public with regard to health matters.

The push for a nationalized health system seems largely political, coming from elected officials and from organized labor, rather than from a grass roots demand. It is based for the most part on two major complaints: that of poor distribution of medical services, and that of the rising cost of medical care. Both of these contentions can be effectively rebutted to interested unemotional groups.

As to the distribution of medical care, it should be pointed out that many independent polls show that the majority of individuals are reasonably satisfied with the availability and with the quality of their personal medical care. Most nationally proposed plans would effectively decrease both of these attributes for this currently well-served majority and they should be so informed. Most consumers will be impressed when they learn of the present bureaucratic (non-medical) controls and limitations on the types of a health service offered, the length of hospitalization afforded, and the trend towards further limitations on availability of community facilities, numbers of hospital beds, what types of surgery will be allowable, etc.

In discussion with lay groups, a more important feature must be the direct and significant costs of their health system. Proponents of change imply that we have an inefficient system and that the medical profession is draining away large profits. The converse is actually true and we should make sure that the public is so aware. Doctors for the most part work on an antiquated piece-work system, long ago outlawed by most labor unions as exploitive of labor but admittedly with a high motivation for productivity. They further run their own business, where profits are closely linked to efficiency and good managerial practices. Most private hospitals are reasonably efficiently run and certainly shine in comparison with their federally managed counterparts. It is readily understandable to most informed lay people that a conversion to the administration by federal bureaucracy cannot lead to anything but waste and extravagance as may be exemplified in any number of fields with which most of us have common experience. The fact that doctors are well paid is easily explainable on the basis that most of them work long intensive hours at a reasonably skilled job; the DHEW's own figures show that whereas doctors' decisions control approximately 60% of the national health care dollar expenditure, the doctors' fees themselves only represent 22% of that dollar. Since approximately half of the doctor's fee goes to provide office salaries and other bits of overhead, one can utilize federal statistics to demonstrate to interested parties that *were doctors to work for free*, medical care cost would thereby only be reduced approximately 11%. Clearly then, the cost of providing medical care is not going to be reduced by changing from our present private practice of medicine, but on the contrary would become a much more expensive proposition despite attempts at bureaucratic cost controls. The greatly increased cost to the taxpayer, under a nationalized health system, is, I think, the most potent political fact to be utilized in these next several months. I feel as a taxpayer that I personally simply cannot afford this type of system. Also to be considered are the facts that services will be limited, that the medical consumer will surrender much autonomy in determining how and when he will receive medical care, and that the incentive to provide good care will be almost inevitably diminished. These are important considerations but probably too complex to be easily presented to the public in the limited time available.

I propose that local societies and individual doctors should proceed to bring this subject to the attention of all during this fall campaign, that organized speaking programs be considered, and what appears to be a very tough and challenging presidential campaign be utilized to educate the public as to the real problems involved with delivering medical care.

I further submit that we could engender a reduction in the total cost of medical care of 35 to 45% almost overnight, at very little sacrifice in the quality or adequacy of such care. This could be done by merely giving patients and doctors incentive to economize where medically permissible and appropriate. The simplest, most fair, and direct way of doing this would be to eliminate third party payments except in part, or to recompense for catastrophic losses. Were patients paying directly for services rather than through insurance systems, their economic constraints would force practical medicine on their physicians, who after all are the only authorities who, having the welfare of the patient uppermost, can make intelligent individual decisions about the cost — effectiveness — safety compromises which are invariably necessary.

But that is another story . . . .

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NORTHERN HIGHLIGHTS — 25

SELECTED ABSTRACTS ON MEDICINE AND PUBLIC HEALTH IN THE NORTH

Bone and Joint Disease in Northern Peoples:

Beasley, R.P.; Retailliau, H.; Healey, L.A.

Prevalence of rheumatoid arthritis in Alaskan Eskimos. *Arthritis and Rheumatism 16:* 737-742, 1973.

This paper reports the findings from a survey of eight north Alaskan villages for cases of rheumatoid arthritis. The authors are with the University of Washington and the Virginia Mason Clinic.

The study was carried out in 1970 in the larger Eskimo villages of the Northwest coast. Record searches were carried out in the Native hospitals at Kotzebue and Anchorage and the community health aides were asked to identify every patient in their villages who were known to have trouble with their joints. A house-to-house survey was then carried out in each village, and blood samples drawn where possible for latex fixation and bentonite flocculation tests.

A total of 897 out of 1,443 adult residents, or 62.7 per cent, were examined for arthritis. Eleven individuals fulfilled the A.R.A. criteria for definite rheumatoid arthritis. The prevalence among persons over 14 was 1.0 per cent for females and 0.5 per cent for males, based on the 1970 census population. The latex fixation test was positive in 51 persons, only seven of whom had R.A. Twenty of these had other joint symptoms and 24 were asymtomatic. Although the frequency of positive rheumatoid factor was equal in males and females, females had twice as much documented rheumatoid arthritis.

Overall, these results indicate that rheumatoid arthritis in North Alaskan Eskimos is similar in prevalence to that found in the general U.S. population, based on the National Health Examination Survey.

McMahon, B.; Armstrong, M.B.

Reiter's syndrome in Eskimos. *Arthritis and Rheumatism 17:*971-2, 1974.

This brief communication reports two cases of Reiter's syndrome, the first to be described in Eskimos. Dr. McMahon was formerly with the Alaska Native Hospital in Bethel and Dr. Armstrong is with the Anchorage Medical and Surgical Clinic in Anchorage.

The first case reported was a 23-year-old male from the lower Yukon who developed a urethral discharge, followed two days later by conjunctivitis. The patient was treated by the health aide in the village. A week later he developed pain and swelling in the right knee and ankle, a condition which led to his hospitalization at Bethel. Medical workup revealed pyuria, a prolonged PR interval and an elevated sedimentation rate. Aspiration of the knee revealed 20,000 RBC and 10,000 WBC, 70 per cent of them polymorphonuclear leukocytes. Cultures were negative. Treatment with penicillin did not appear to alter the course of the disease.

The second case was diagnosed in a 19-year-old man from the lower Kuskokwim. Initially he had a three-week history of urethral discharge and swollen ankle but no eye symptoms. The sedimentation rate was elevated and the urine contained 100-150 WBC/Hpf. Joint fluid showed 89,400 WBC (99 per cent polys) with a positive rheumatoid factor. Cultures were negative. He was treated with IV penicillin with rapid improvement. Nearly nine months later he was readmitted at Bethel with urethral discharge and bilateral conjunctivitis. Ten days later he returned with a swollen right ankle. With the diagnosis clearly established, he was begun on a course of salicylates and phenylbutazone and followed in the arthritis clinic.

Walker, J.M.

General joint laxity in Igloolik Eskimos and in Island Lake Amerindians. *Human Biol. 47:*263-275, 1975.

This paper discusses the findings from a survey of a Canadian Eskimo and Indian population for the condition known as generalized joint laxity, defined as excessive range of motion in several pairs of joints. The author is with the Department of Anatomy, McMaster University, Hamilton, Ontario.

These studies were carried out in 1972-73 on 298 Eskimos from the Igloolik-Hall Beach area in the Eastern Arctic, and on a group of 396 Cree-Ojibwa Indians from Island Lake, Manitoba. Generalized joint laxity was diagnosed when three or more of five standardized paired tests were positive. Such tests involved the thumbs, fingers, elbows, knees, and ankles.

Eskimos exhibited a significantly greater degree of generalized joint laxity than Indians through all age groups, especially in the 5-9 age group. The degree of laxity decreased with advancing age. No individuals were positive after the age of 19. Some 15.2 per cent of Indians and 30.2 per cent of the Eskimos were determined to be positive. No significant differences were noted between sexes with regard to joint laxity.

In the Island Lake group, no correlation was seen between generalized joint laxity and congenital hip dislocations. This latter condition was not found in the Eskimo population. Differences in traditional modes of infant carriage (*Amatik* vs. cradleboard) were noted to be present in the two groups.

Mazess, R.B.; Mather, W.

Bone mineral content of North Alaskan Eskimos. *Amer. J. Clin. Nutrit. 27:*916-925, 1974.

This study examines the skeletal status of Eskimos of the North Slope with regard to the mineral content and size of the bones. The authors are with the Dept. of Radiology, University of Wisconsin Hospital, Madison, Wisconsin.

Measurements were made in 1968-70 on 413 subjects of various ages using a direct photon absorptiometry method. The majority of individuals tested were from Wainwright, though a few were also from Barrow and Point Hope. Direct readings of bone mineral content and bone width were possible and these were correlated with height and weight measurements.

The bone mineral content (BMC) in Eskimo children was generally within five per cent of that of white children when expressed as a ratio of BMC to weight. In young adults the BMC/W ratio was almost the same in the two groups. By age 40 and above, however, significant differences were beginning to appear, with the Eskimo measurements consistently less than those of the whites. These differences were especially striking in measurements of the midshaft radius. Eskimo males lost about 6-7 per cent of the BMC per decade after age 40 and females as much as 10-12 per cent. It is of interest that similar findings were evident among the now-extinct Sadlermiut Eskimos of Canada.

Several possible nutritional explanations are offered for these findings, including a vitamin D deficiency, a high protein diet, and the acidic effect of a meat diet.

The clinical significance of these findings is that the lower BMC of Eskimos leads to lower bone strength in older persons, thus making them more susceptible to fractures. As the population ages, it may be that this problem will become more apparent.

Mazess, R.B.

Bone mineral content in Canadian Eskimos. *Human Biol. 47:*44-63, 1975.

This paper extends the methods of study reported above to the Igloolik-Hall Beach Eskimos of the Canadian Eastern Arctic. A total of 335 individuals were tested for bone size, height, weight, and BMC.

In general, Canadian Eskimos were found to be about two per cent shorter and 5-12 per cent lighter in weight than their Alaskan counterparts throughout the life cycle.

Peak values for BMC in the Canadian group were reached in males at age 17-18 and in females at age 15-16. Values remained fairly steady until the age of about 50, after which bone loss became quite apparent in both sexes. These values were very similar to those seen in Alaskan Eskimos, except that in the group over 50, demineralization occurred at a greater rate among the Canadian group. Among these, males experienced a 10 per cent loss per decade, and females some 15 per cent per decade.

The authors found that the Sadlermiut skeletal remains showed a high incidence of compression fractures of the vertebrae, though such fractures have not been reported to be common among the current population. Further studies are needed to elucidate the biochemical mechanisms by which Eskimos maintain calcium homeostasis.

Pawson, I.G.

Radiographic determination of excessive bone loss in Alaskan Eskimos. *Human Biol. 46:*369-380, 1974.

This paper reports a survey made in 1968 on the Eskimo population of Wainwright, as part of the U.S. contribution to the International Biological Program. The hands and wrists of some 154 children and adults were examined by a portable X-ray unit and the results compared with similar studies elsewhere in the world. From the radiographs, estimates of bone age, bone size, and cortical bone area were made.

The skeletal development of the children was found to be similar to that of U.S. children with respect to maturity and changing morphology.

In the case of adults, an early onset of bone loss, particularly cortical bone, was demonstrated. This cortical bone loss was largely endosteal bone, as noted in the metacarpal midsection. If these findings can be extrapolated to the whole body, most elderly Eskimos would be classified as "severely osteoporotic," and unusually liable to fracture. Elderly females should be at particular risk for injury, especially since their bones are also smaller and more fragile than those of the males.

No satisfactory dietary explanation is apparent to account for these findings.

Robert Fortuine, M.D.

LETTER TO THE EDITOR

Dear Sir:

This tabulation of Fairbanks physicians' votes on prefiled resolutions is presented for publication in "Alaska Medicine" for distribution to the members of the ASMA, as well as physicians in Fairbanks. This indicates how the Fairbanks physicians feel about the first nine resolutions.

RESOLUTION VOTES		YES	NO
RESOLUTION I	"AMA Membership"	8	6
RESOLUTION II	"Federal Fees"	14	0
RESOLUTION III	"FDA Authority"	11	3
RESOLUTION IV	"Bargaining Unit"	12	2
RESOLUTION V	"Bicameral Government"	10	4
RESOLUTION VI	"Use of Social Security No. as Source of Identification"	9	5
RESOLUTION VII	"Avoid Subsidizing PSRO'S"	9	5
RESOLUTION VIII	"Professional Liability"	8	6
RESOLUTION IX	"Professional Liability"	14	0

At the May meeting of the Fairbanks Medical Association, the resolutions were presented in writing. By due parlimentary procedure, the secretary was instructed to distribute these resolutions and have a written ballot return indicating the desires of the local physicians.

Unfortunately, this was not accomplished until long after the State meeting. Whether the endorsement by the Fairbanks Medical Association, sometimes overwhelmingly, would have influenced the action of the State association is and always will be unknown. A majority favored all of the resolutions, sometimes unanimously. It does show the need to proceed as in the past with a straw vote of the Fairbanks physicians at the meeting prior to the State convention, wherin comments of the physicians present can be heard, influencing the timely vote. This will hopefully be done next year.

Respectfully submitted,

Henry G. Storrs, M.D., Chairman
ASMA Resolutions Committee

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.;* severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)
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ALASKA MEDICINE

Volume 18, Number 6

November 1976

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Associated depressive symptoms

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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

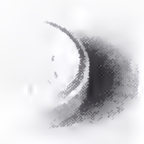
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

1135 Eighth Avenue, Suite 6, Anchorage, Alaska 99501

Volume 18 November 1976 Number 6

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THE ALASKA THERMAL TREATMENT CENTER AT PROVIDENCE HOSPITAL

Robert E. Mallin, M.D., F.A.C.S.
Donald B. Addington, M.D., F.A.C.S.

This is a preliminary report on a Thermal Unit which is now more "de facto" than the gleaming new physical plant that will be. The Thermal Unit will gather the manpower and materiel, in one place, for the care of all thermal injuries (i.e., frostbite and hypothermia as well as burns and hyperthermic injuries). These functions are currently being carried out at Providence Hospital on a PRN basis. A room or rooms are comandeered as needed and changed into miniburn or frostbite units and appropriate sterilization procedures are attempted. Professional staff and services are gathered as needed.

The need for a Thermal Unit in Alaska in not new. We are the leading state in terms of burn death per capita per year. While it is true that many of these deaths are persons who are too remote to get to a treatment facility, the statistics are still alarming. Also, our unique position and climate, associated with the presence and accessibility of Mt. McKinley, allow a greater number of hypothermia and frostbite patients than most other places in the world.

We will not attempt to deal with the actual treatment of these injuries now. We understand that frostbite has been excellently covered by Dr. Mills in a previous issue and we will be talking more about burns at a future date. We wish to describe the conceptual plans for the Thermal Unit and its physical setup.

Conceptually, the treatment of burns and frostbite is as different as, to quote Dr. Mills' analogy, "the results of burning a newspaper or freezing it." The frozen newspaper is capable of being read and used, if properly treated and thawed, while the burned paper is totally and irreparably changed. Basically, survivability of the frostbitten tissue depends on treating it initially as a sterile wound and keeping it so from the outset, doing minimal debridement at the latest possible time. On the other hand, the full thickness burn wound is theoretically contaminated quite early and debridement is more aggressive and is used as a manner of reducing contamination and getting ready for skin coverage.

With this in mind, the Alaska Thermal Treatment Center will combine both hot and cold injuries, in one unit. Inside the treatment area, they will be separated. While they will both be treated in a sterile manner, additional isolation procedures will be carried out between the individual areas. It is planned to have individual whirlpools in the frostbite patients' rooms but one large Hubbard tank will be used for all burn patients with adequate disinfecting between uses. Debridement areas, showers and respiratory therapy services will be separate. While sterile central supply items will arrive on the same cart, they will be stored in different areas convenient to the treatment areas of the various patients.

As you know, Providence Hospital, the largest hospital in the state, has recently expanded its facilities by the addition of the North Tower to the complex. This has provided for the upgrading of many facilities such as acute care, radiology and physical therapy. Additional space in the older South Tower is to be used for expanding of obstetrics and gynecology and placement of the Thermal Unit. It is our plan to utilize the old Intensive Care and Coronary Care

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3300 Providence Dr., Anchorage, Alaska 99504

areas for the new Thermal Unit. As soon as carpeting can be removed and walls painted, we will move into this facility. Until then the Progressive Care and Isolation suites are temporarily being used. The complete remodeling, for which the architectural plans have been drawn and finalized, will take place as rapidly as practicable and we will soon be in a position to accept transfer patients to this unit.

Other positive steps are already long underway, including the gathering of both professional and material resources for the Thermal team. We are fortunate to have professional staff, people with desire, experience and skill to treat the various phases of these injuries (medical and surgical) and ancillary staff consisting of a very well-experienced Physical Therapy Department, which will be adding total body and smaller tanks and other modalities to the Thermal Unit. It is projected that an additional therapist will be hired, who may work solely in this area. Additional equipment for respiratory therapy is being obtained, so that some of the machines may be always located in the unit. On the spot X-ray capability will also be added.

The facility is already in contact with the National Institute of Burn Medicine and will contribute statistics and information to that group. There are several active members and applicants to the American Burn Association in the hospital and the nucleus of a small library has already been started. Various members of the team are in contact with other burn organizations and information is disseminated at our weekly thermal conferences. Detailed nursing care procedures are being outlined. If all goes well, a winter seminar is planned. The seminar will detail both the capabilities of the Providence Hospital facility, the current thinking on the treatment of thermal injuries as well as nursing care, ancillary care and emergency care of these injuries. We have had a commitment from Dr. Edward Falces of the Saint Francis Hospital Burn Unit in San Francisco to take part. As far as utilization is concerned, we will not burden the reader with statistics, however, suffice to say that hot and cold thermal injuries have been markedly increased over the past two or three years to the extent that there always seem to be two or three patients in the hospital at any given time. If one were to include the patients undergoing reconstructive procedures, this figure is substantially higher.

The physical layout of the Thermal Unit will eventually be the entire fifth floor of the South Tower of Providence Hospital. Initially, it will encompass the 12-bed ICU and CCU areas. As one enters the double doors, on the right side of the hallway, everyone (staff and visitors) will change into scrub suits, gowns, shoe covers, head covers and face masks. To the right, will be the physical therapy area, including one large Hubbard tank with a side loading mechanical hoist. The debridement area will be adjacent to this. These areas will be completely cleanable. Essential nursing area and central supply exchange will be to the left. Individual patient rooms will next be seen, with glass partitions allowing view from the nurses' station and the read-out of the various monitors. This will allow maximum visibility of the patient to the environment as well as vice versa. The air in these areas will be sterile. Further to the left, will be another set of double doors. Once these are opened, the frostbite rooms are seen. They are similar, in most respects, except that individual whirlpool facilities will be present. This area will be serviced by separate nursing personnel.

As plans develop, the rest of the fifth floor will be used to house patients in the progressive care stage as well as patients undergoing rehabilitative procedures. The advantages of having patients undergoing reconstructive procedures in the same physical area as acute burns, is mainly one of morale. This works both ways; patients who are acutely ill see that progress can be made and the advanced patients compare their present state with what used to be. As in any specialized unit, a sense of continuity and "esprit de corps" develop. This is shared by patients, staff and visitors.

Several sources of funding are available to us. These include state, federal, private industry, and organizations.

It is encouraging to see the enthusiasm with which the administration and professional staff of Providence Hospital have gotten behind the Thermal Unit and the weekly conferences. We look forward to this being a top treatment facility, capable of national recognition within the foreseeable future. We are eager to accept any comments, suggestions or research protocols that are of interest to any of the state's physicians.

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PREVENTIVE DENTISTRY PROGRAM FOR MENTALLY RETARDED AND HANDICAPPED CHILDREN

R. D. Tarver, D.D.S.

A preventive dental program has been initiated for a group of approximately 60 mild to severely handicapped and mentally retarded children in the Anchorage, Alaska area. Most of the children seen are afflicted with mongolism, cerebral palsy, epilepsy, or some combination of the three. The preventive program established includes dental examinations, prophylaxis, topical fluoride applications, needed restorative treatment, weekly 0.2% NaF mouthrinses, brushing instructions for the nurses and aides caring for the children and the use of electric toothbrushes for patients with impaired muscular control.

I. Description of Problems

One of the most frequently neglected aspects of health care for mentally retarded and handicapped children is that of dental services.[1] The reasons for this situation are many and complicated, ranging from ignorance of the parent or institution caring for the children in relation to preventive dentistry, to neglect by the dental profession itself. Until recently many dental schools never mentioned care for the handicapped, let alone taught a course in it.[1] Most general practice dentists have no training whatsoever in care for the handicapped.[1] This is unfortunate for the children because they are the ones suffering from the lack of care. Poor attitudes of dentists has been another problem encountered, many that could take care of this type of child refuse to treat them. But attitudes of both dental schools and dentists are changing. Many dental schools are now offering undergraduate classes in care for the handicapped and many dentists, after recognizing the great need for dental care for this type of child, are beginning to treat them on a regular basis, rather than just for emergency extractions.

The problems encountered here in Alaska are even more severe as compared to other areas of the country, because of the isolation of villages, transportation problems, and until the last 5 to 10 years, the lack of dentists. Dental care is still difficult to obtain in Alaska, especially for the Alaska Native in isolated villages, but conditions are greatly improved now and dental care is becoming more available to all. Dental care for the handicapped and mentally retarded children in Alaska has become somewhat easier to obtain because most of these children are receiving care in Anchorage, either at the Alaska Psychiatric Institute, or in the Hope Cottage system, a private nonprofit organization.

The two most prevalent dental conditions found among both handicapped and nonhandicapped populations are periodontal disease and dental caries.[2] Periodontal disease is especially prevalent in the handicapped population, since it develops to a large extent because of lack of proper oral hygiene and home care.

II. Special Conditions Affecting Dental Health

Special dental conditions may develop in children whose dental health is compromised by

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R. D. Tarver, D.D.S., formerly with the Alaska Native Medical Center Dental Clinic, Anchorage, Alaska.

such problems as cerebral palsy, mongolism or epilepsy. These diseases can cause various changes in the structure or function of the tissues in the mouth and thus may require a comprehensive preventive program to maintain the patient in a reasonable state of dental health.[3-7]

Cerebral palsy is a neuromuscular condition which can vary in type and severity and be manifested by spasticity, athetosis, rigidity, ataxia, tremor, or any combination of these. The most common result with any of the above types is lack of muscular coordination which makes it difficult if not impossible for the patient to maintain his own dental care. This abnormal muscular activity also affects the oral cavity causing a higher incidence of malocclusion and other oral muscular problems.[7]

This neuromuscular condition also complicates the chewing and swallowing processes, making it very difficult for the patient to keep his mouth voluntarily open for any length of time. This also makes it difficult for him to chew any hard, fibrous types of food, which may act as natural cleansing mechanisms to aid in reducing the quantity of plaque on the teeth. Tongue and cheek movements are also abnormal and do not act as natural cleansing aids as they normally would. The eating process is further complicated by an increased amount of saliva and drooling. Tongue thrusts are also a common abnormality caused by the impaired swallowing. The tongue thrust may cause the anterior teeth to be pushed forward, thus forming an open bite. The open bite then leads to mouth breathing, which dehydrates the gum tissue and makes it prone to infection and periodontal disease.[7]

The habit of grinding the teeth, or "Bruxism," is another common problem of this population. In many cases the teeth are worn down to flat surfaces and metal crowns must be placed on the teeth to prevent further attrition.[7]

Mongolism or Trisomy 21 is a genetic condition associated with a chromosomal abnormality in which there are three chromosome 21s instead of a pair. The incidence of mongolism in the population has been estimated between one and four per 1,000. The condition is more frequent in children born to older mothers, particularly those aged over 35 years, but where the mother is young there may be an inherited translocation of one of the pair of chromosome 21. All mongoloid children are mentally retarded to some degree.[7]

The oral condition associated with mongolism is quite significant. Because of hypotonia of the lip musculature, the lower lip usually hangs loose, very often with persistent cracks, and the tongue protrudes above it. The latter is often described as enlarged, but in most cases this appearance is due to lack of oral space with consequent protrusion. There is marked fissuring and the circumvallate papillae are enlarged.[7]

Mongoloid children may have congenitally missing teeth, and the teeth they do have are usually smaller than normal and tend to be rounded or bulbous. These teeth are remarkably resistant to dental caries, which may be due to their simpler form, but no clear reason has been found yet.[7]

One of the most serious dental problems the mongoloid child faces is a highly destructive disease of the periodontal tissues which support the teeth. This periodontal syndrome begins to affect the tissues in the anterior part of the mouth at a very early age, and all of the dentition becomes affected as the child grows older. The typical pathologic changes include progressive hyperemic reactions in the gingiva, apical migration of epithelial cells of the gingival crevice, lysis of connective tissue fibers in the periodontal membrane, resorption of alveolar bone, formation of gingival pockets, and gradual exfoliation of the teeth themselves. By the time these children have reached their upper teens, nearly all of them have lost several teeth in a process which will continue without abatement.[7]

Due to the mongoloid child's greater predilection to periodontal disease, it is particularly important that a comprehensive preventive program be started to eliminate as much plaque and debris as possible so that irritation to the gingival and periodontal tissues will be at a minimum. Several studies have shown that a good hygiene program will slow down the periodontal disease process for these children to a significant degree. [11-14, 19, 22]

Other dental problems the mongoloid child has are tongue thrusting, open anterior bite, mouth breathing, bruxism and malocclusion. The malocclusion is caused by the small size of the maxilla with its lack of forward and downward development which often results in an Angle's Class III or prognathic mandibular-maxillary relationship. This occurs in one-third or more of these children.[7]

Epilepsy is another debilitating disease that may indirectly cause a dental problem due to the medications used to control the disease. Treatment of these convulsive conditions is by the use of drugs to suppress the episodes. One of the most common drugs used is sodium diphenylhydantoin (Dilantin), which is of special interest to the dentist. A hyperplastic gingivitis of a fibrous nature develops in many cases treated with this drug and it may be so severe that it covers most of the crowns of the teeth, or cause delayed eruption. The diphenylhydantion seems to make the gingival tissue hyperreactive to irritation caused by dental plaque with the response being an overgrowth of the tissue. This gingival overgrowth can be held to a minimum in most cases if plaque and debris are eliminated by the child being maintained under a good oral hygiene program.[7]

III. Preventive Dental Program Started

For any child, but especially for a handicapped child, a good preventive dental program is essential. If periodontal disease can be held down to a minimum and restorative work kept as simple as possible, so that lengthy dental appointments are not needed, then a real service is being performed for these children. For the severely retarded child who is unable to be treated with normal dental technique, this may mean the elimination of treatment under general anesthesia. For the mild to moderately retarded child, who can be treated at chairside, traumatic visits to the dental office can be avoided.

A good preventive program for a handicapped child should include brushing techniques, frequent fluoride applications, proper diet, staff educated in the special problems of dental care for the handicapped child and yearly examinations by a dentist. [8-13, 15-17, 19-25]

Such a program was started for the Hope Cottage System in Anchorage, Alaska, a non-profit organization designed to care for and rehabilitate retarded and handicapped children and adults. A preventive program has been started for two aspects of the Hope Cottage System: the totally dependent children, of which there are approximately 33, and 30 younger school age children living in small groups being cared for by house parents and aides.

A. Brushing Techniques and Fluoride Treatments for the Totally Dependent Children

At Hope Cottage the dental needs of the totally dependent children are performed by the RN's and aides. These people had been brushing the children's teeth 1-2 times a day prior to this, but none had ever received any instruction on different techniques, methods or positions for brushing. A lecture and slide demonstration was presented to the staff caring for the totally dependent children discussing special dental problems encountered and showing different brushing positions and techniques and the use of mouth props of various types.

Totally dependent children present with varies conditions regarding their ability to cooperate. Many are unable to sit up, maintain one position for even a short period of time or, to hold their mouth open for brushing. Some patients are very cooperative and are able to sit up, while others need two people to hold them down. Many are bedridden and unable to control any of their movements at all.

As shown in the accompanying illustrations: if the patient can sit up, a chair may be used with either the patient sitting in the chair and the attendant working from behind supporting the head with one arm or with the attendant in the chair and the patient on the floor being supported by the attendant's legs. (Fig. 1-2) If the patient is bedridden it is still best to work behind the patient so that the head can be controlled and supported. If two people are needed to control the child this can either be done in the bed or by using two chairs with one attendant holding the arms and legs and the other holding the head and brushing. It was found at Hope Cottage the best method was to remove the child from bed, place him on a table and with the aid of one or two other people restraining, brush his teeth. (Fig. 3)

Many of the children are unable to keep their mouths open, so the use of a mouth prop is very helpful. It was found that the 'Molt Mouth Prop' was the easiest and most efficient to use. Three of these mouth props were supplied for use at Hope Cottage by the Alaska Native Medical Center Dental Clinic. The prop is placed on one side of the mouth, opened and held in position while the teeth are cleaned on the other side. The prop is then changed to the other side and the process repeated.

A topical fluoride program was also started at Hope Cottage. A commercial topical fluoride gel of 1.23% NaF is used with the gel being applied once every six weeks. The gel is applied at the same time the child's teeth are cleaned. The following instructions were given to the attendants:

1. Make applications once every six weeks.
2. Use bite opener during the procedure.
3. Place bite opener on one side of mouth and gently open child's mouth until you feel you have enough room to work. Be careful not to pinch lips between teeth and bite opener.
4. Clean upper and lower teeth on opposite side of mouth from bite opener with toothbrush, using no toothpaste.
5. Dry teeth as much as possible with gauze or tissue.
6. Place fluoride gel on toothbrush and brush gel on upper teeth. Use only enough gel to cover the top of the brush. Try and cover all the surfaces of the teeth. Use more gel if necessary to cover all of the teeth, but do not use excess.

(Continued on page 84)

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

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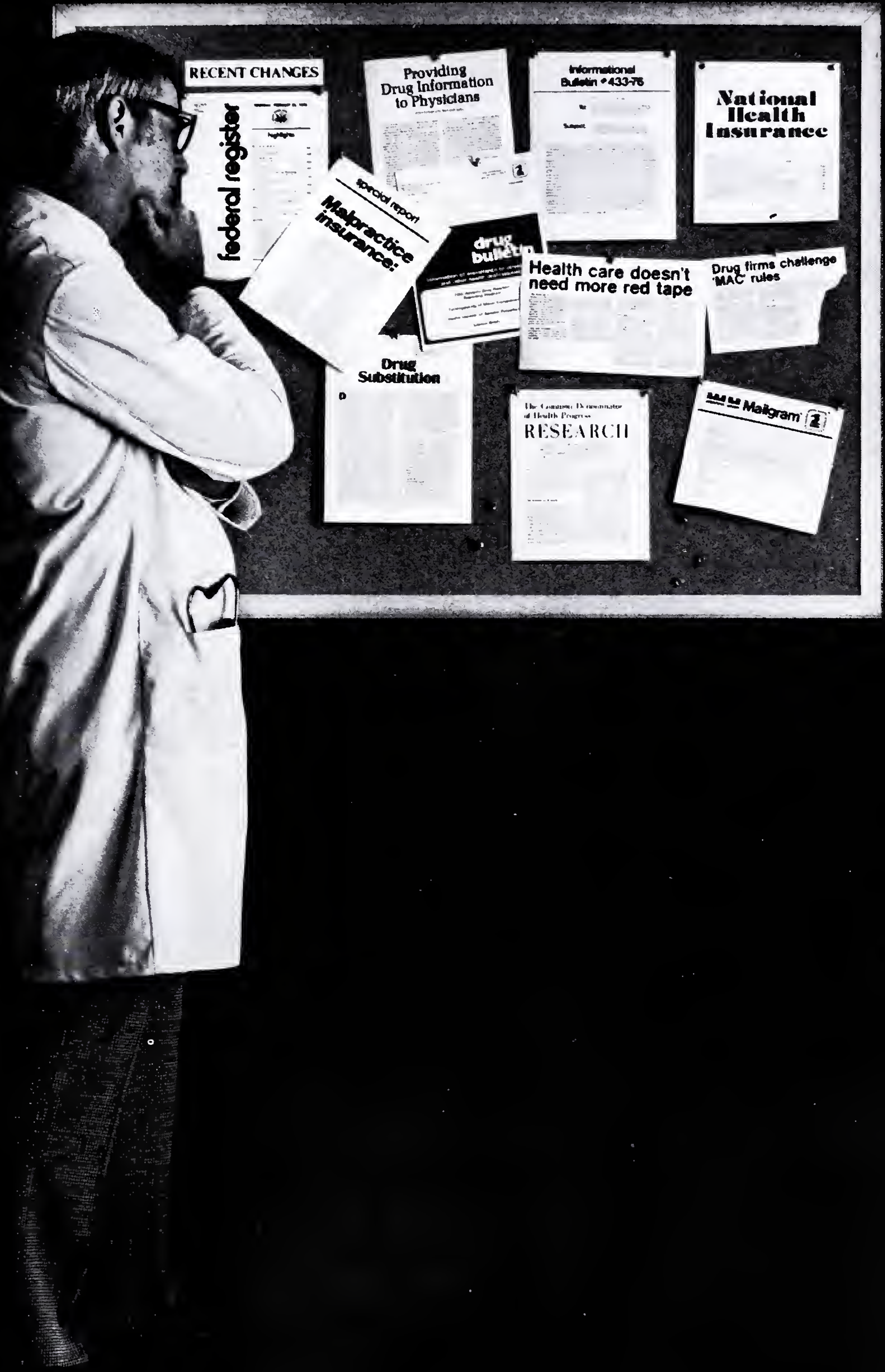
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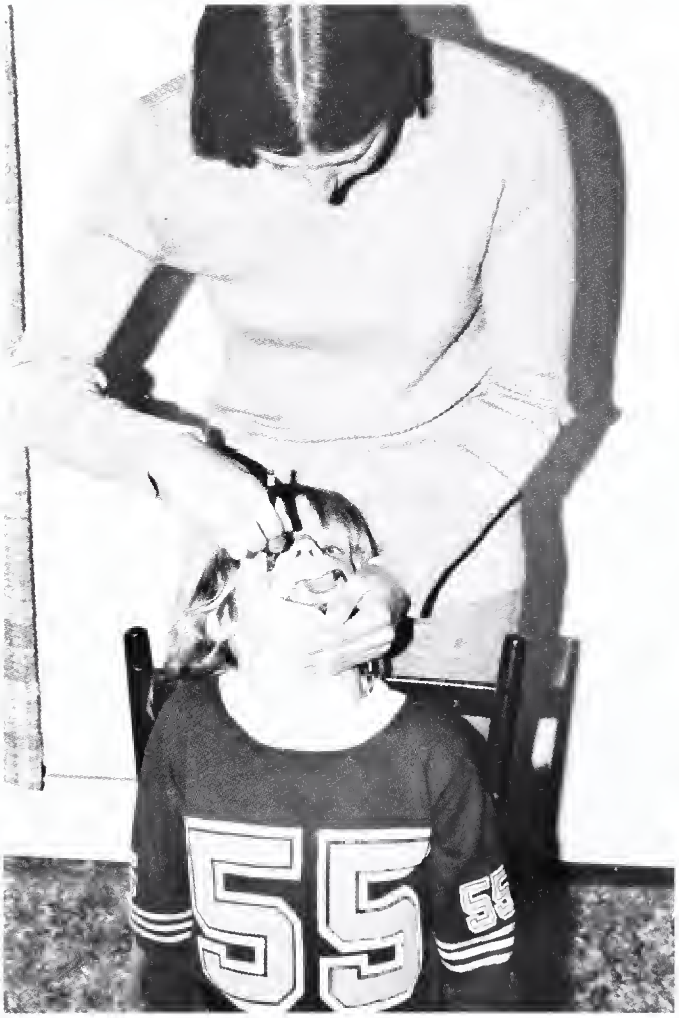

Fig. 1 Aide standing behind patient supporting head and holding mouth prop with one hand and brushing with other.

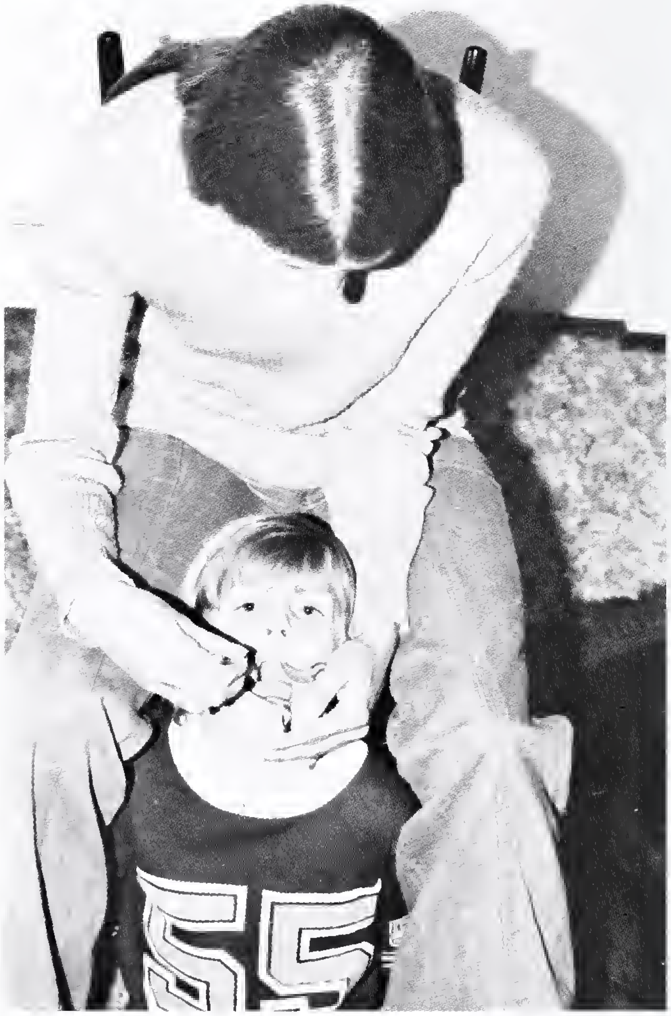

Fig. 2 Aide sitting in chair supporting patient with legs and again holding head and mouth prop in place.

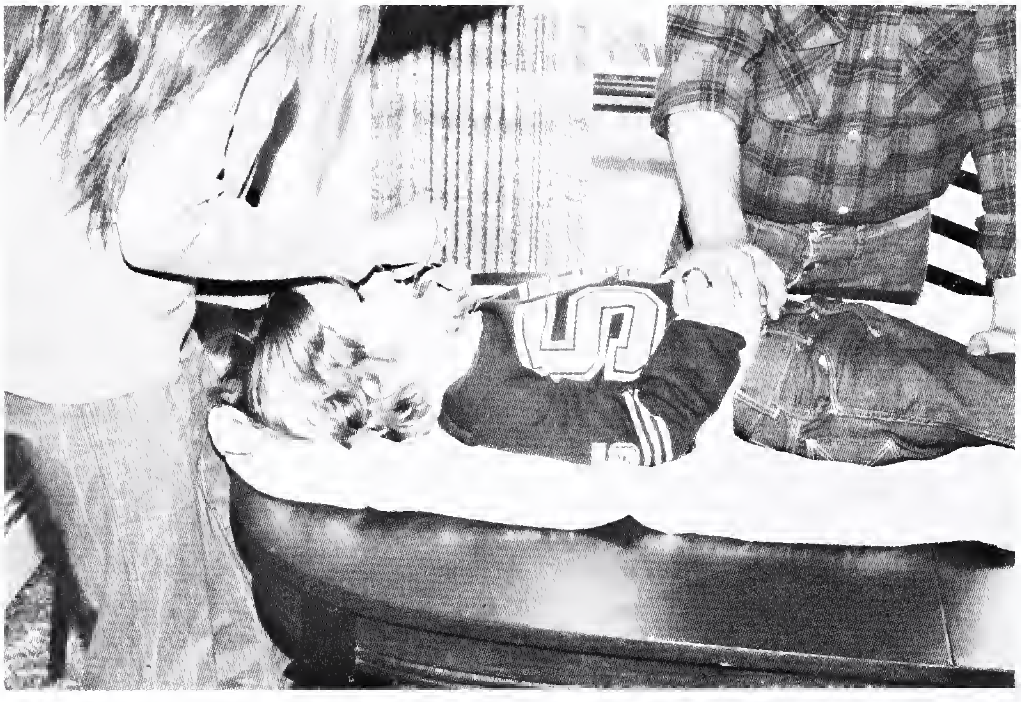

Fig. 3 Patient supine on table with one aide supporting head and brushing teeth with assistance of another aide to help restrict patient's movements.

7. Repeat on lower teeth with a new brush full of gel.
8. Try and keep fluoride gel on teeth for 3-4 minutes.
9. Wipe off as much of the gel as possible.
10. Repeat whole procedure on other side of the mouth.
11. Patient should not eat or drink for ½ hour after fluoride application.

One problem arose in determining the concentration and frequency that could be used for the fluoride applications since the children could not spit out the excess gel and no suction was available. It was determined, after consulting with the pharmacy at the Alaska Native Medical Center, that no problems with toxicity, either acute or chronic, would be encountered if the applications were performed once every six weeks with as small amount of gel as possible used.

After discussing the topical fluoride applications procedure with the nursing staff at Hope Cottage it was decided that one-third of the 33 children would be treated every second week. It was thought that this would be easier for the staff, rather than doing all of the children at one time.

It was also made clear to the nurses that the 1.23% fluoride gel could be a very toxic substance if too much was consumed and it therefore be locked in a drug cabinet when not in use.

The nutritional aspect of the children's care was another area studied. Because of the decreased muscular function and abnormal chewing pattern found in many of the children, it is very difficult for them to masticate hard food. Most of the food they receive has been chopped up or blended to make it easier for them to eat. Although such food is nutritionally acceptable for them it is bad from a dental standpoint because the teeth are not being at least partially cleansed with roughages, such as vegetables, fruits and meats, as would normally occur. This is one of the major hygiene problems that is encountered when working with the totally dependent children and an excellent reason why a good preventive and oral hygiene program is essential.

B. Fluoride Mouthrinses for the Mild and Moderately Handicapped Children

A preventive dental program was also started for the younger handicapped children of Hope Cottage who are able to attend school and function fairly well of their own under the supervision of house parents. After the children had been examined and routine dental care completed at Alaska Native Medical Center Dental Clinic, a once a week fluoride mouthrinse program was started. A 0.2% solution of NaF was supplied for the children to use once a week after brushing their teeth. The children were instructed to use 1 oz. of solution and swish it in their mouths for one full minute and then spit it all out and not drink or eat for ½ hour. The following list of instructions was given to the house parents for proper use of the mouthrinse:

1. Mixing 0.2% NaF Solution
    a. Mix one package of NaF powder* with four liters water.
    b. Be sure all of powder from package is mixed thoroughly in water.
2. Fluoride Mouthrinse Procedure
    a. Each child will receive mouthrinse once per week.
    b. Rinse should be done after brushing teeth for best results.
    c. Place 1 oz. of NaF solution in small cup or glass.
    d. Have child rinse solution in mouth for one full minute.
    e. At end of minute solution is to be spit out into cup or sink. It is important that the child not swallow the solution.
    f. After rinse is completed instruct child not to eat or drink for 30 minutes.

As mentioned in the above fluoride mouthrinse instructions it is very important that the child spit out the solution when the rinsing is completed. After observing this phase of the program for several weeks it was noted that many of the children were unable to rinse properly and spit out the solution as instructed. This inability to spit out the solution is caused by their poor muscular coordination and lack of proper swallowing reflex. Therefore, because many of the children were not able to spit out the fluoride solution this phase of the program was discontinued. However, if the child can tolerate the procedure this weekly rinsing can be very beneficial for him and should be continued. Recent research has shown that frequent fluoride rinses are more beneficial than topical applications once every six months or yearly.[14,18] Daily or almost daily, application of appropriate preparations of fluoride has an extremely adverse effect on microorganisms in dental plaque. It also makes the mineral components of teeth highly resistant to demineralization, inhibits the decalcifying potential of plaque acids, and promotes posteruptive maturation of enamel and remineralization.[18]

A brushing aid for several of the children was also obtained. Because of spasticity and loss of muscular control the children are unable to manipulate a toothbrush properly to maintain adequate oral hygiene. Electric toothbrushes were provided for the patients to aid in their home care. These brushes will be used throughout the Hope Cottage System for patients having difficulty brushing. An electric toothbrush is an extremely helpful device for anyone who has had some loss of function or coordination in his hands or arms, such as in the case of most of these children.

---

*NaF powder, 8-gram packet, Medical Products Lab., 1010 Arch Street, Philadelphia, Pa. 19107.

C. Restorative Dental Treatment for Handicapped Children

Included in the preventive program started for the mild and moderately retarded children is routine restorative dentistry on an outpatient basis. Most of the patients accepted the treatment well; however, some required sedation before any work could be accomplished. The standard pedodontic sedation solution of 20mg/ml of meperidine, 10mg/ml of chlorpromazine and 10mg/ml of promethazine was initially used with .05cc of solution per kg. of body weight being given, I.M., one hour before the appointment. After using .05cc of solution per kg. of body weight with several of the patients it was determined that this amount was not giving adequate sedation. The amount of meperidine, chlorpromazine and promethazine was therefore increased to .075cc of solution per kg. of body weight and this was supplemented with 50mg/kg of Chloral Hydrate which was given orally. In most cases this combination gave adequate sedation for the necessary dental work with the child still being awake and alert enough to be responsive. No adverse reactions were encountered in using these drugs with the children. The main side reactions to be aware of when using these drugs is respiratory depression and allergic responses, neither of which is seen very often. The reason these patients require more sedation than normal is not clear, but may be due to their receiving sedative medication on a daily basis or because of the hyperactivity associated with their underlying disease.

IV. Summary

The dental disease that affects the handicapped child is no different from that of a healthy patient, except that in most cases it is much more severe. Children with mongolism, cerebral palsy and epilepsy have a variety of problems, including intraoral, extraoral and muscular coordination difficulties, which affect their ability to maintain adequate oral hygiene. In most cases the child is unable to care for himself and oral hygiene procedures need to be performed for him or under close supervision.

(Continued on page 87)

LIBRIUM®
(chlordiazepoxide HCl)
5 mg, 10 mg, 25 mg capsules

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

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A record so voluminous it had to be put into a computerized storage and retrieval system.

Take the matter of safety, for example.

Experience with millions of patients indicates that the most common side effects of Librium are dose-related and, therefore, largely avoidable. There appears to be a low potential for dependence. Tolerance rarely develops. Few cases of known toxicity have been reported. However, patients should be cautioned about possible combined effects with alcohol and other CNS depressants.

Librium seldom produces adverse effects on the cardiovascular or respiratory system. It is used concomitantly with many primary medications, such as cardiac glycosides, antihypertensive agents, anticholinergics, diuretics, antacids and anticoagulants. It should be noted that variable effects on blood coagulation have been reported very rarely in patients receiving Librium and oral anticoagulants; however, a causal relationship has not been established clinically.

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LIBRIUM® CIV

chlordiazepoxide HCl/Roche

THE ANXIETY-SPECIFIC

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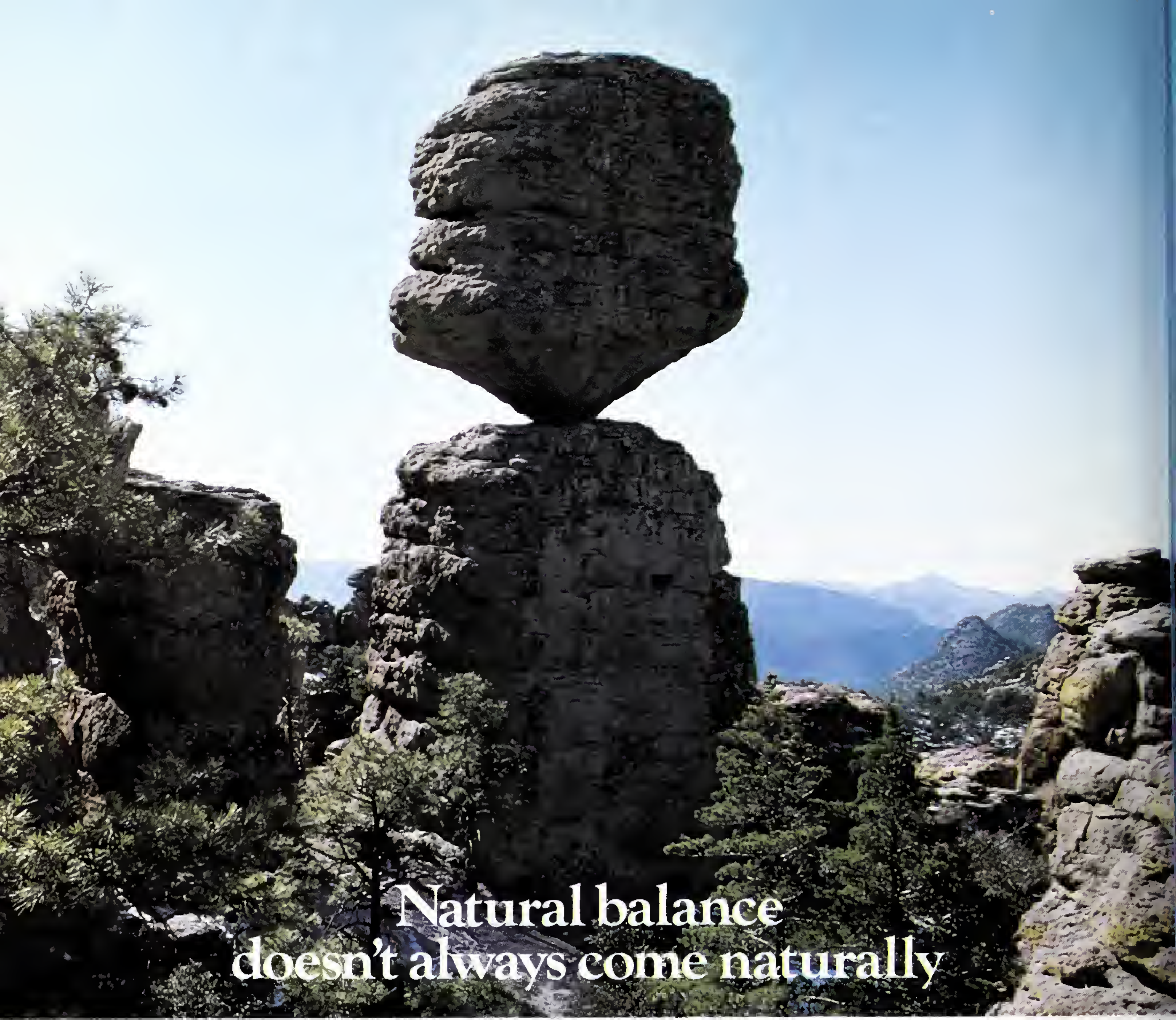
Please see summary of product information on opposite page.



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- **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.
- **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*
- **Dosage for Vertigo***—The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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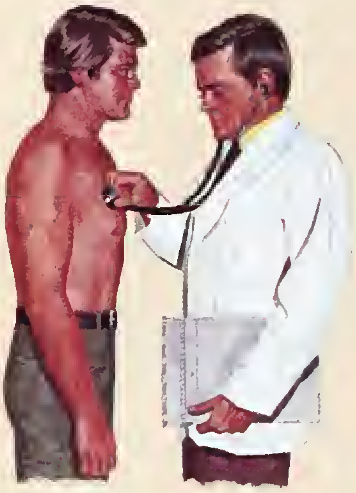
Narrowing down pneumonias

Upjohn

Bacterial or nonbacterial?

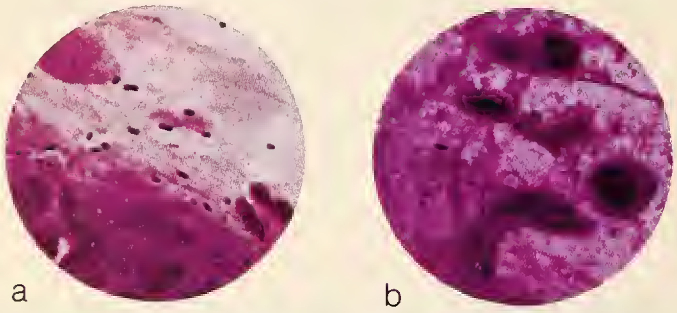


In the early stages of mild to moderate pneumonia, it is often difficult to reach an accurate bacteriologic diagnosis. A tentative differentiation may be made on history-taking, physical examination, CBC with differential analysis, and microscopic study of the sputum smear. Specimens should be obtained for culture and sensitivity testing, but when a bacterial pneumonia is diagnosed, therapy is often instituted before the etiological agent is positively identified.

Bacterial pneumonias may have a sudden onset with a shaking chill, rapid development of fever, pleuritic pain, and cough productive of rust-colored sputum. The Gram-stained sputum smear generally shows polymorphonuclear neutrophils as well as a predominance of the causative organisms. These are likely to be *Streptococcus pneumoniae*, still by far the most frequently encountered agent in bacterial pneumonia.[1] The CBC reveals marked leukocytosis with a shift to the left.

In *nonbacterial pneumonias*—mycoplasmal or viral—classical symptoms tend to develop more slowly, with myalgia, lassitude, and headache predominating. Sputum production is usually scanty, and the sputum smear is relatively uninformative, showing gram-positive cocci and other organisms which are part of the normal pharyngeal flora. The leukocyte count is normal or slightly elevated.

Direct Gram-stained sputum smears. (a) Pneumococcal pneumonia—note abundant polymorphonuclear leukocytes, as well as gram-positive diplococci. (b) Nonspecific—consistent with viral or mycoplasmal pneumonia. Note large mononuclear cell, as well as a few polymorphs and mixed bacterial flora (pharyngeal contaminants).

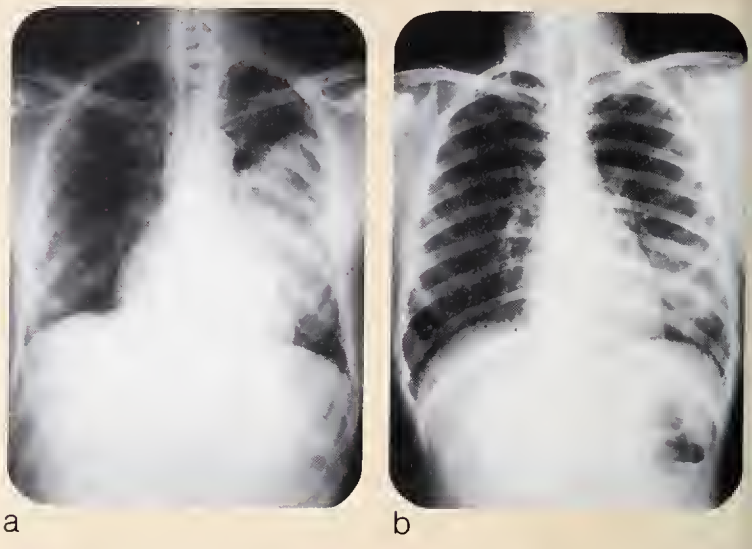


Mycoplasmal or viral?

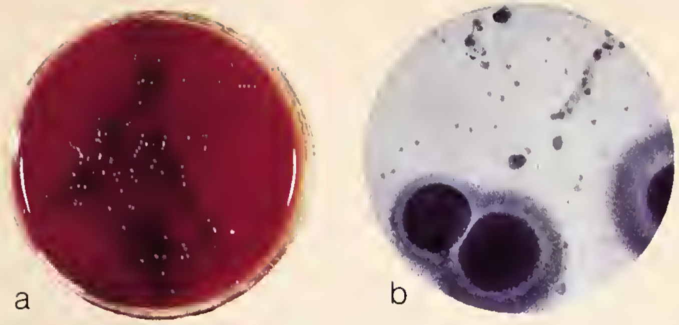
Differentiation between mycoplasmal and viral pneumonias may be impossible in the acute stage.[2]

Serologic testing and culture methods for *Mycoplasma pneumoniae* are complex and time-consuming, taking as long as two weeks after obtaining samples. The sensitivity and specificity of the test for cold agglutinins have been questioned. The complement-fixing antibody test may reflect previous infection. Furthermore, facilities for culturing *M. pneumoniae* are not widely available.[3]

If treatment is to be initiated, therefore, it may be necessary to start on the basis of a *presumptive* diagnosis of mycoplasmal pneumonia.[1-3] In reaching such a diagnosis, the physician relies on clinical judgment, considering such factors as the age of the patient and the history of exposure. For example, *Mycoplasma pneumoniae* is considered the most common cause of pneumonia among ambulatory patients aged 20 to 35.[1]



Chest x-rays of patients with (a) pneumococcal pneumonia—classically heavy, extensive infiltration of left lung; (b) mycoplasmal pneumonia—mild infiltrate confined to left lower lobe. Roentgenography usually does not help in differential diagnosis, since both types of pneumonias may present with a wide spectrum of x-ray as well as clinical findings.



(a) Distinct mucoid colonies of type 3 pneumococci *(Streptococcus pneumoniae)* on sheep blood agar showing greenish discoloration (alpha-hemolysis) of medium. (b) Typical "fried-egg" colonies of *Mycoplasma pneumoniae* consisting of dense central core with lighter periphery. Cultural and serologic methods for detecting *M. pneumoniae* are complex, time-consuming, and not widely available.

Expectant therapy

In the patient with a presumptive diagnosis of mycoplasmal pneumonia or bacterial pneumonia, it may be desirable to initiate antibiotic therapy before culture and sensitivity results are available.

A course of erythromycin or tetracycline is considered effective in the treatment of mycoplasmal pneumonia to help speed the clearing of infiltrate and shorten the duration of symptoms.[1,3] In pneumococcal pneumonia, erythromycin is an effective alternative to penicillin, the drug of choice. A recent report, based on data from 200 hospitals of 100 beds or more, found 98% of *S. pneumoniae* sensitive *in vitro* to erythromycin.[4]

Among these therapeutic agents, only erythromycin provides effective coverage of both *Mycoplasma pneumoniae* and *S. pneumoniae*. The penicillins are not effective against *Mycoplasma*, and *S. pneumoniae* has shown a relatively high incidence of resistance to tetracycline.

When erythromycin is selected for therapy, E-Mycin (erythromycin enteric-coated tablets, Upjohn) is a good choice. E-Mycin is administered and absorbed as active erythromycin base, and may be taken q.i.d., q 6h, or b.i.d., immediately after meals or between meals. Thus, patients can use mealtimes to help them remember their medication. The enteric coating on E-Mycin tablets helps ensure efficient absorption in the intestinal tract, and bioavailability studies show that E-Mycin can be expected to produce predictable, acceptable blood levels. The low cost of E-Mycin helps assure economical therapy.

E-Mycin rarely causes serious side effects and is not associated with liver toxicity.* The most frequent side effects are upper gastrointestinal, such as abdominal cramping and discomfort, and are dose-related. Nausea, vomiting, and diarrhea occur infrequently with usual oral doses. Serious allergic reactions, including anaphylaxis, have rarely been reported.

*Use cautiously in patients with severe liver impairment

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Summary

Because pneumonias may be difficult to differentiate at the outset, treatment is often initiated before a causal diagnosis is made. However, readily available diagnostic criteria occasionally allow early differentiation between bacterial and nonbacterial pneumonias. When the diagnosis appears to be nonbacterial pneumonia, further differentiation between mycoplasmal pneumonia and viral pneumonia is more complex and time-consuming. Therefore, therapy is often initiated on the basis of a *presumptive* diagnosis of mycoplasmal pneumonia.

Erythromycin is an effective antibiotic against *Mycoplasma pneumoniae, Streptococcus pneumoniae,*† and *Streptococcus pyogenes.*† E-Mycin (erythromycin enteric-coated tablets, Upjohn) is administered and well absorbed as the active base, may be taken immediately after meals or between meals, and is essentially nontoxic.

†Although penicillin remains the drug of choice against these organisms, erythromycin is an effective alternative.

E-Mycin® 250 mg

erythromycin enteric-coated tablets, Upjohn

wide-ranging usefulness in pneumonia*

*Mild to moderately severe, due to susceptible organisms.

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1975-1976 Data are a compilation of laboratory reports submitted during December 1975 and January and February 1976 by 200 acute care hospitals of 100 beds or more

Please turn page for brief summary of prescribing information.

Wide-ranging usefulness in pneumonia*

E-Mycin® 250 mg

erythromycin enteric-coated
tablets, Upjohn

Upjohn

- For mild to moderately severe infections due to susceptible organisms that commonly invade the respiratory tract
- Essentially nontoxic (see Precautions and Adverse Reactions below)
- Documented bioavailability
- May be taken immediately after meals or between meals
- Active base formula produces predictable blood levels
- Formulated for quality...priced for economy

E-MYCIN® TABLETS — 250 mg — For Oral Administration (erythromycin enteric-coated tablets, Upjohn)
E-Mycin Tablets are specially coated to protect the contents from the inactivating effects of gastric acidity and to permit efficient absorption when administered either immediately after meals or when given between meals on an empty stomach.

Indications: *Streptococcus pyogenes (group A beta-hemolytic streptococci):* Upper and lower respiratory tract, skin, and soft-tissue infections of mild to moderate severity. Parenteral benzathine penicillin G is considered by the American Heart Association to be the drug of choice in the treatment and prevention of streptococcal pharyngitis and in long-term prophylaxis of rheumatic fever. When oral medication is necessary (because the parenteral route is contraindicated) or if there is known allergy to penicillin, the following recommendations made by the American Heart Association apply: 1) Oral penicillin G or V (where no allergy exists)—This is the drug of choice. Give for a minimum of 10 days; 2) Erythromycin—Give for a minimum of 10 days. A few strains of streptococci resistant to erythromycin have been reported.

Alpha-hemolytic streptococci (viridans group): Short-term prophylaxis against bacterial endocarditis prior to dental or other operative procedures in patients with a history of rheumatic fever or congenital heart disease who are hypersensitive to penicillin. (Erythromycin is not suitable prior to genitourinary surgery where the organisms likely to lead to bacteremia are gram-negative bacilli or the enterococcus group of streptococci.)

Staphylococcus aureus: Acute infections of skin and soft tissue of mild to moderate severity. Resistance may develop during treatment.

Diplococcus pneumoniae: Upper respiratory tract infections (eg, otitis media, pharyngitis) and lower respiratory tract infections (eg, pneumonia) of mild to moderate degree.

Mycoplasma pneumoniae (Eaton agent, PPLO): In the treatment of primary atypical pneumonia, when due to this organism.

Treponema pallidum: Infections due to this organism.

Corynebacterium diphtheriae and *Corynebacterium minutissimum:* As an adjunct to antitoxin, to prevent establishment of carriers, and to eradicate the organism in carriers. In the treatment of erythrasma.

Entamoeba histolytica: In the treatment of intestinal amebiasis only. Extraenteric amebiasis requires treatment with other agents.

Listeria monocytogenes: Infections due to this organism.

Contraindication: Contraindicated in patients with known hypersensitivity to erythromycin.

Warning: Safety for use in pregnancy has not been established.

Precautions: Erythromycin is principally excreted by the liver. Caution should be exercised in administering the antibiotic to patients with impaired hepatic function. Surgical procedures should be performed when indicated.

Adverse reactions: The most frequent side effects of erythromycin preparations are gastrointestinal, such as abdominal cramping and discomfort, and are dose-related. Nausea, vomiting, and diarrhea occur infrequently with usual oral doses. During prolonged or repeated therapy, there is a possibility of overgrowth of nonsusceptible bacteria or fungi. If such infections occur, the drug should be discontinued and appropriate therapy instituted. Mild allergic reactions such as urticaria and other skin rashes have occurred. Serious allergic reactions, including anaphylaxis, have been reported.

Treatment of overdosage: The drug is virtually nontoxic, though some individuals may exhibit gastric intolerance to even therapeutic amounts. Allergic reactions associated with acute overdosage should be handled in the usual manner—that is, by the administration of adrenalin, corticosteroids, and antihistamines as indicated and the prompt elimination of unabsorbed drug, in addition to all needed supportive measures.

How supplied: 250 mg enteric-coated tablets—in bottles of 100 and 500 tablets, and in unit-dose packages of 100 tablets. Caution: Federal law prohibits dispensing without prescription.

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NAS-4

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*Mild to moderately severe, due to susceptible organisms.

A preventive dental program has been started for a group of handicapped children ranging from totally dependent, severely retarded children to mild or moderately retarded children capable of attending school. The program for the totally dependent children involves brushing twice a day by nurses and aides, topical fluoride applications every six weeks with a 1.23% NaF gel solution and six-month dental examinations with needed treatment accomplished when possible, usually under general anesthesia. The program for the mildly retarded children involves dental examinations, needed restorative treatment on an outpatient basis, prophylaxis with topical fluoride application, a weekly 0.2% NaF mouthrinse, and use of electric toothbrush when possible.

With these programs established it is felt that the dental disease in these patients can be kept in check and held down to a minimum, thus eliminating a major source of discomfort. Dental problems can never be eliminated completely in this group due to abnormal development of oral musculature, teeth and tongue and due to malocclusion, but a program can be established to raise the quality of dental care and make life a little more pleasant for the handicapped child.

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THE OPHTHALMIC SALUTE

Milo H. Fritz, M.D.F.A.C.S.*

Diplomate of the American Board of Ophthalmology

This is the 200th year since our founding as a government the most successful so far that people have chosen or been forced to live under. The reader could be excused if he felt the title indicated a small tribute by a special group to this celebration of our 200th birthday. On the contrary, it is an almost reflex act performed by millions of all ages every day in the pursuit of their lives because their glasses slide down their noses. It is a mindless gesture forced upon us by the cupidity of many manufacturers of eyeglass frames, the indifference of opticians, and ignorance of even the most elementary rudiments of opticianry on the part of almost all ophthalmologists.

Opticianry is not taught in a single approved residency in the entire United States of America, and therefore, of course, all young graduating ophthalmologists have little if any knowledge of this important phase involving the prescribing of properly fitting and esthetically satisfying, modish and efficiently functioning spectacles.

Look around you! The young mother picks up her infant from his playpen. Having him securely in her arms she salutes the indifferent optician, the ignorant ophthalmologist and the venal frame manufacturer by shoving her glasses up on her nose with the tip of the third finger, grasping the frame with thumb and forefinger or, using the knuckle of her second finger to push the ill-fitting spectacles up on her nose.

Nationwide, carpenters, plumbers, electricians, all artisans who lower their heads for the infinite jobs connected with their trades, millions of workers in every field of endeavor, children at play, sports-minded youths, air transport captains give the Ophthalmic Salute making their obeisance to venality, indifference, and ignorance in order to get their glasses up before their eyes instead of resting on their cheeks, tipping rakishly over one side of the face or so adjusted by the inexorable law of gravity causing the wearer of these execrable frames to look through the upper part of the frame and glass, the frame only, or over the lens entirely rendering the spectacles completely useless.

Now why is this? Frame manufacturers have to live too and a change in fashion is one of the reasons for the change in materials, color, shape and ornamentation. But, in spite of these changes, there is no need for changing the so-called temple which reaches over the ear and should wrap around it so that the glasses cannot slide down from their position before the eyes as they rest upon the bridge of the nose.

Eyeglasses at one time were held before the eyes by a pince-nez and a coy golden chain that hooked over the ear and a spring clip made them pinch on the nose. Next came the metal frames and temples that hooked around the ears in a proper way — the rigid ones called riding bows — for equestrians, and the flexible ones now called comfort cables which accomplish the same thing, holding the spectacles where they belong by wrapping around the ear. Both hold the glasses before the eyes and keep them resting on the bridge of the nose. Finally the so-called paddle temple or skull type temple was developed. These are cheaper than comfort cables or riding bows and appear on over 95% of frames displayed in the shops of optometrists and opticians. Their acceptance depended on initial comfort' because there was no pressure on the back of the ear and no need to disarrange the hair.

Palmolive soap in the average man's imagination conjures up green palm trees and their graceful fronds. But, never underestimate the power of Madison Avenue! They now sell pink Palmolive soap. In the same way, the advertising media have made the paddle type temple the vogue. It sometimes is called skull or slide-back temple which holds the glasses in place by hugging the head plus putting pressure against the skin and stress on the resiliency of the temple. But on most the hinge soon gives way, bends so the lens pops out, or just simply can't be "adjusted" anymore.

Some use an elastic strap around the back of the head. This fastens on the tips of the temples and holds the spectacles in place. Some artisans and many athletes use this improvisation which is uncomfortable at best and unsanitary besides. They also disarrange hair and often force the nose pads into the skin of the nose sharply enough to leave a painful little dent after the glasses have been removed or the elastic band taken off.

The pernicious paddle temple is held up in ludicrousness by Walt Kelly, the cartoonist, to embellish his character Owl whose temples reach clear behind his head — but then most of us don't have beaks or Walt Kelly to help us.

Even many of our otherwise well-informed and observant authors speak of "horn-rimmed" spectacles which disappeared from the optical scene some decades ago. What our authors mean is heavy plastic rimmed spectacles. This important information cannot be too widely spread especially among those who write for a living.

---

*Anchor Point, Alaska 99556.

For the ultimate demonstration of the Ophthalmic Salute, I recommend that you see the videotape in the State of Alaska when the Governor read his State of the State Address to the First Session of the Eighth State Legislature and gave 53 Ophthalmic Salutes in one hour — enough to exceed the patriotic demands of the most right-wing organization.

At the recent Academy meeting in Dallas the Optical Manufacturers of America had a booth. I stopped and tried to explain the absolute necessity of having frames so made that the patient would have a choice between paddle temples, comfort cables and riding bows. The blank looks and the squirming of those manning the booth made me realize that they thought I was crazy or that I thought they were. As a result, I received 78 lavishly colored catalogs of optical goods for sale by various firms all over the United States and Canada.

Next, even without a grant from the NIH, I found out that in some medical schools in the U.S.A., even one famous for its department of ophthalmology, ophthalmology is an elective course! In no medical school I received information on in the United States is a brief course in opticianry taught as part of the residency program. So, even if multiple types of temples were available, most ophthalmologists would not have the knowledge to discuss a proper choice with the patient and the decision would then have to be made by the patient or by the optician.

When I came to Alaska in 1940 there were no opticians. I found frames doctored together by wire and glue and ingenious devices of all kinds awaiting the day the patients could see the one optometrist/optician in Alaska or go south to the lower 48 — a minimum of 10 days' round trip.

My only choice, not wishing to depend on an optometrist for patients requiring glasses, was to go and learn a little opticianry myself. Accordingly, I took the advantage of the kindness of Mr. Conrad Carlson then of E. Haustetter Company of New York. He had me in his shop for a couple of days, set me up with a kit of frames and a set of opticians' tools and showed me how to measure and properly fit glasses and the differences between the various kinds of frames and the relationship between them and the patient's job.

I learned the importance of the angle between the frame and the temple and the necessity in some cases of having adjustable nose pads versus the wide-place nose pads on plastic frames which, of course, are fixed and cannot be adjusted. I also acquired a war surplus set of frames used for measuring people for gas mask spectacles. On each frame which had plain lenses in it were etched the pupillary distance, the eye size, the bridge size and the temple length and all the temples, of course, were comfort cables.

Back in Alaska I continued working in bush communities and small settlements traveling by plane, boat, train, dog team and on foot. My home and office were in Anchorage.

As far as refractions and glasses were concerned I was a resounding success from the start. My glasses fitted, and they did not slide down the patient's nose. Neither did he look between the cheek and the lower rim of his glasses when attempting to use the reading segment of his bifocals and I learned about a bifocal in which the reading segment occupied about 75% of the lens with just a small space at the top for distant vision — ideal for barbers and called a "Rede Rite" bifocal now only obtainable on special order.

Another great discovery, still unknown to most ophthalmologists, is the Double D trifocal. They are called Double D's because the two segments, one above and one below the center part are in the shape of a letter D. The segment for reading is under the center as in a conventional bifocal and the upper one is not quite as strong because it is generally used above eye level at arm's length by such people as librarians, pharmacists, carpenters, electricians, plumbers and others who must stand on ladders and scaffolding and still see things clearly at arm's length. One of my presbyopic patients, an ingenious chap, who had a job involving arm's length work above eye level turned his bifocals upside down when working.

Airline captains are also very grateful for the Double-D trifocal since it allows them to see through the center for distance, the lower portion for his approach plates when going in for a landing and to scan the instruments above the wind screen when necessary. Many of my presbyopic pilots wear quadrifocals so they can see at arm's length above and below eye level and read at 14 inches, too.

In the 1940's, the Natives were supplied with any kind of frame they wanted so long as it was gold-colored metal and round or oval. At that time these were called Berwyns. Thus, with his round cheeks (if not dying of TB) and tiny nose when he smiled his glasses were raised so he regarded distance through his reading segment and the frame and when his face was in repose he looked at the world through the lens and top of the frame.

Nobody likes being branded a second-class citizen. Our Native Alaskan is no exception. Many, needing even high corrections, would go without badly needed glasses rather than be branded a poor Native by virtue of his Berwyns. A Native today, of course, since the claims settlement act has become law, is the equivalent of a Boston Brahmin.

After many years of trying I got the government agencies involved in Native health to supply a limited set of glasses without class distinction but, of course, they all had paddle temples and consisted of the styles of yesteryear with such appealing names as Man Brow, Spanish Tile, Kiss Me Dear and other copyright names of an equally nauseating character.

Of course, when prosperity struck, the Natives ordered the eyewear they wanted and almost always accepted recommendations for anything but a round- or oval-lensed frame and for comfort cables or riding bows, neither of which, of course, dictate the style of spectacle that is pleasing to the patient.

So far, my lone campaign to get the optical manufacturers to supply riding bows, comfort cables and paddle temples for every type of spectacle frame they manufacture has been singularly unsuccessful. Even the loyal Guild of Prescription Opticians, a national organization extremely helpful when I introduced in the Alaska Legislature, legislation eventually passed and now a national law making soft lenses and inflammable frames illegal, have failed to back me on this important aspect of prescribing and wearing spectacles.

There are certain firms in the country that allow the optician a choice of the type of temple required, apparently recognizing the fact that all people's jobs and the configuration of all faces are not identical. But, most people settle for paddle temples and innumerable "adjustments" because the optician, fearful of losing a client, creates all sorts of imaginary difficulties such as "back order," "it will cost more," or "there may be several weeks of delay." And so the patient settles for paddle temples thus in many cases lowering the result of effort put forth by the patient himself and by the doctor during the examination of their eyes.

What to do about it? Well, I send all of my patients to a small optical company here in Homer, Alaska, run by two ladies, who stock a large number of those styles for which all three types of temples are available.

If I were once again the the Legislature I might succeed in making this choice mandatory for any optical goods dispensed in the state. I know there would be plenty of witnesses from the optical companies throughout the country showing that this is "impossible."

If I could address the American Association of Optical Manufacturers at the decision-making level and show the film of our Governor's 53 Ophthalmic Salutes in one hour — that might do it. But, time is eternal, life is short and one's physical and mental powers lessen yearly. So, even after the Bicentennial year is over the Ophthalmic Salute will continue until something is found as a substitute for spectacles or 2076 is upon us with the Ophthalmic Salutes still in evidence — testimony to the gap in training of the ophthalmologists, the greed of those optical manufacturers who consider the lesser cost of paddles over the comfort cables as a reason for forcing on an ignorant public a shoddy product.

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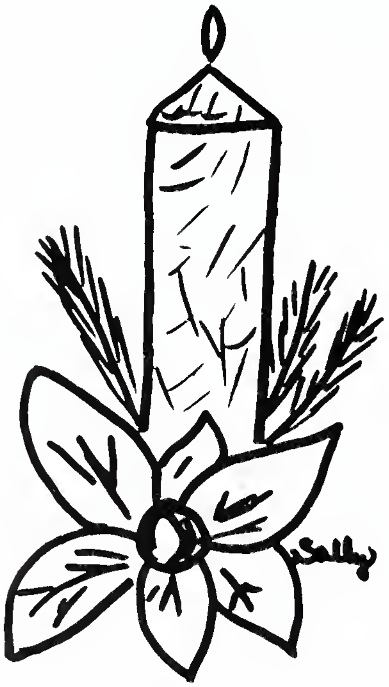

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WHEN A HEARING AID WILL HELP

PRESIDENT'S PAGE

This is written in early November, after the hearings on the original filing of the MICA Board, and soon after filing of a suit against the actions of the MICA Board by a number of medical groups. It seems necessary to mention the timing of the authorship in view of the rapid changes which are taking place these days. Last fall and winter there was a general loud protestation by the medical profession to our Legislators and to the public via newspaper ads (punctuated by the withdrawal of many doctors from active practice) that malpractice insurance was not available, inadequate and that we could not practice without it. Now that we have insurance available, of a sort, there is loud outcry against the provision of it by a quasi-official organization. Why?

Some physicians in the state did not and do not have insurance, and although relatively nonvocal a year ago are finding the law's requirements onerous.

Many doctors thought they needed insurance, but having been forced to work without such protection, found that they could tolerate the risk nicely, enjoyed the economy, and concluded after reflection that the residual risk of loss through suit, though unprotected nominally, was considerably reduced by the fact that they were a much less attractive target.

Some physicians need and want insurance, but feel that the State's program for providing the same, particularly by a mandatory plan, is expensive for the degree of protection afforded or in other ways undesirable.

Almost all physicians have found that the originally proposed plan of the Medical Indemnity Corporation of Alaska had a premium structure which was onerous, insultingly invasive, in many ways unfair, and in general unnecessarily complex.

Probably the most important objection was that of being mandated into a situation where ones right to trial could be abrogated through the actions of a board or committee, particularly when such was selected or established without voice from its subjects, the doctors.

Robert D. Whaley, M.D.

It now seems that it will take considerable time to reach a consensus among physicians as to a desirable course, but there must revolve one basic distinction. Those aspects of the 1976 law which are unacceptable will have to be changed legislatively. In the interim each doctor must decide whether he can live with the law subject to appropriate modification of policy by the governing board. If so, then he must determine exactly what policies would be necessary to make such accommodation possible. If a substantial group can agree on such, the question will be, can such modifications be obtained?

The state association will entertain continuing input from its members as to desirable changes to be sought during this coming legislative session. We expect the Legislative Committee to be an active and aggressive one this winter and spring. In the interim however, it would seem the constructive policy to attempt to obtain such modifications of MICA policies as are possible. To this end a special committee to deal with this problem was appointed and did meet with the governing board of the Medical

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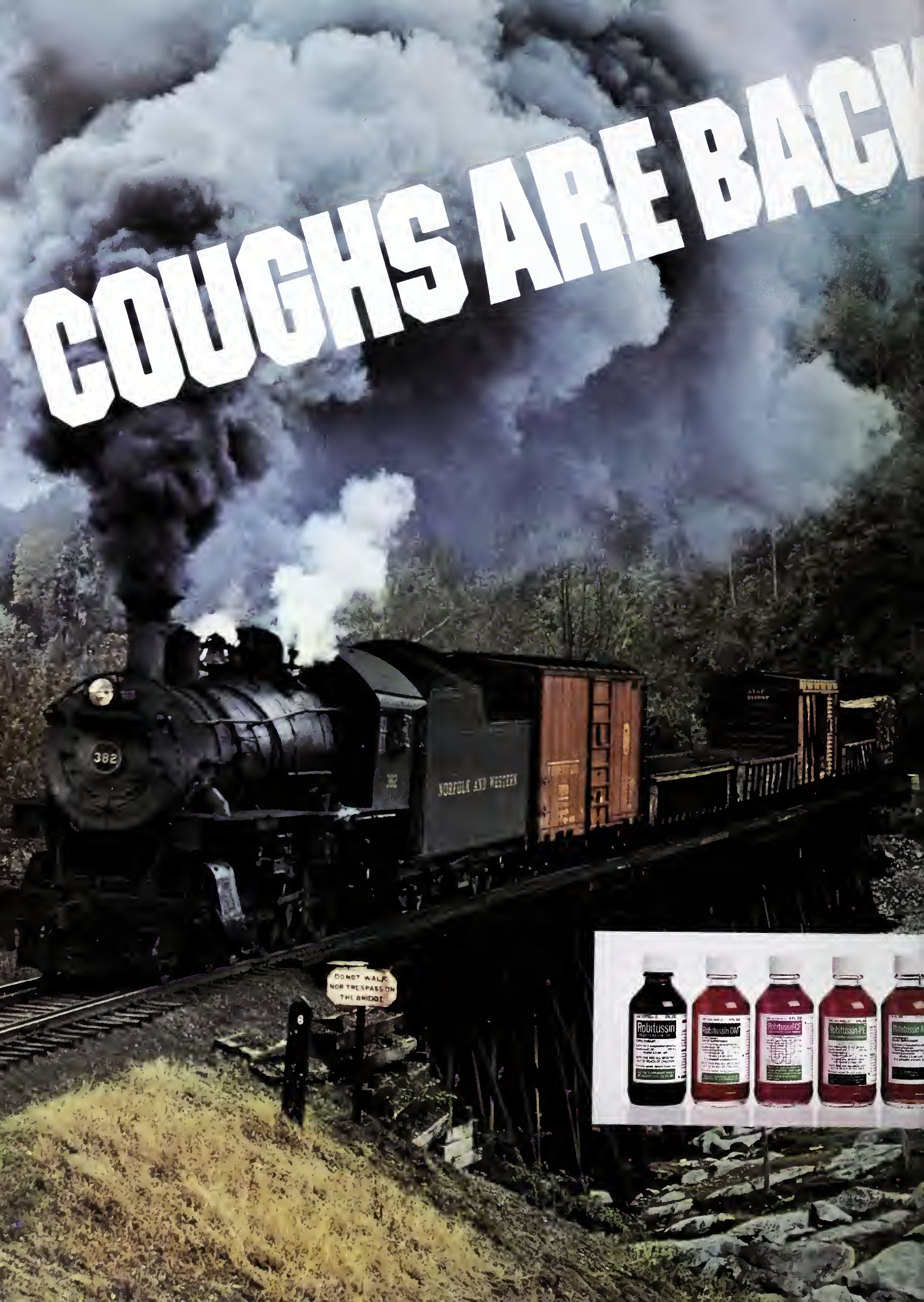
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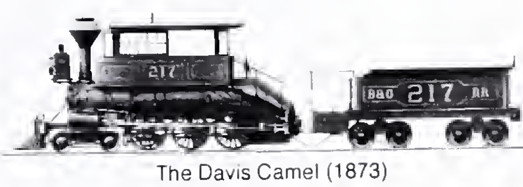

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Indemnity Corporation on November 5-6, 1976. An attempt was made to make this committee representative of the association as a whole, a difficult task when probably one-third or more of physicians in Alaska are polarized into each of two basic philosophies, that of militant opposition to the present policies of the law's administration, and that of tentative cooperation in the hope of appropriate evolution of those policies. Thus representation was sought from each of the local component medical societies as such societies might see fit, with initial representation being the president of such society or his delegate, plus two extra delegates from the particularly vocal southcentral group of physicians.

At the meeting with the governing board, a note of compromise was struck. It seems likely that rather significant alterations in operating policy of the governing board may be apparent shortly. The significant changes would be in the assurance of availability of trial should the defendant so desire, and a premium structure which should be reasonably acceptable to most of the physicians as judged by their earlier complaints. If such new policies are formalized by the board, the state association office will canvas Alaska physicians and members of the association to determine what further actions your organization should take both in regard to the insurance plan, to future legislative changes that will be desired, and its posture in regard to any court litigation.

We believe it important that solidarity of Alaska physicians be maintained through their state association and wish to make it an effective instrument for their welfare. We may sorely need such an instrument in the foreseeable future under our new national administration.

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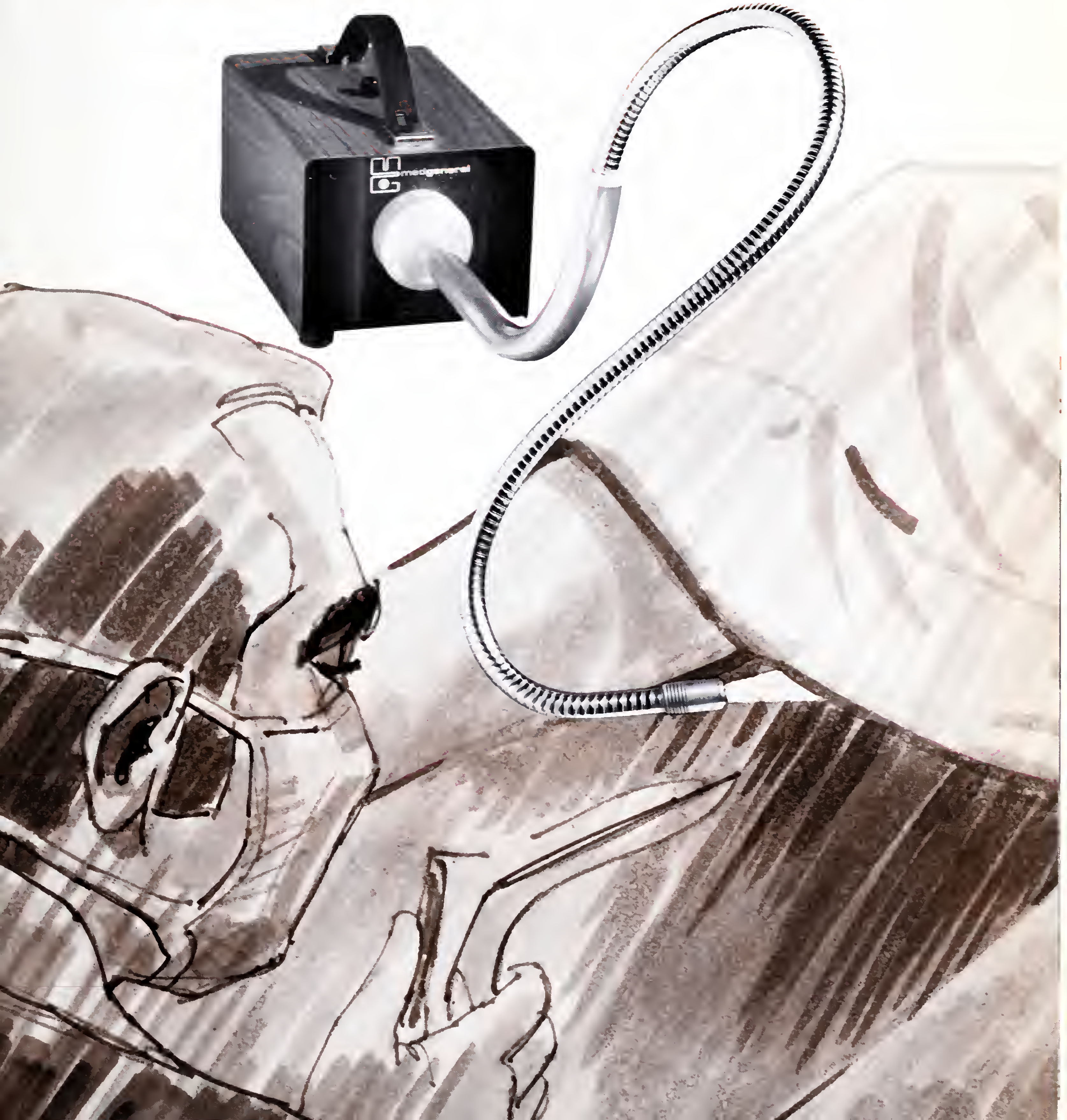

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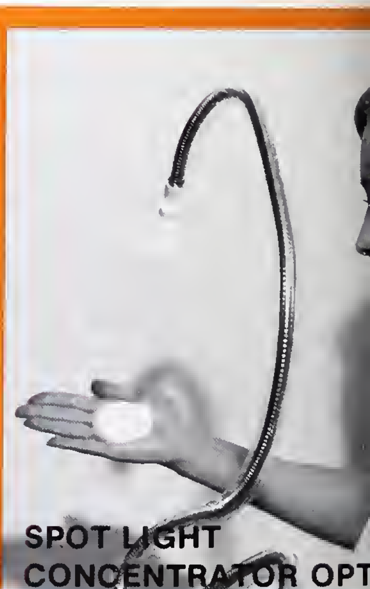

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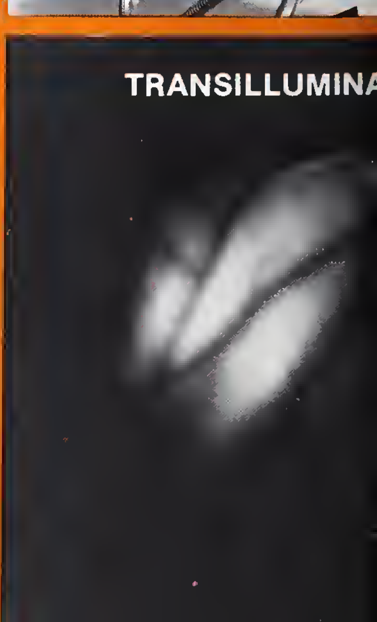

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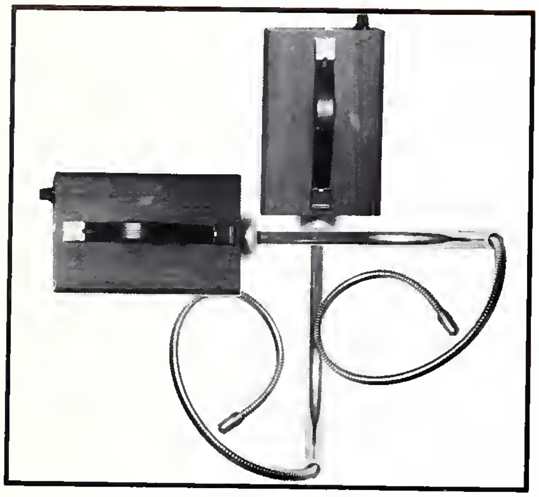

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COMMISSIONER PAGE

Francis S. L. Williamson
Commissioner
Department of Health and Social Services

Francis S. L. Williamson

In Alaska, the medical emergency has long been a source for tales of heroism, valor, and endurance. Behind these tales, however, has been the reality of acceptance by Alaskans, as a way of life, of accident and trauma and their possible fatal consequences. Whether isolated in a small community or a bush cabin, whether on a hunting or fishing trip, or traveling by automobile or snowmachine, Alaskans often realize that should an accident or sudden illness strike, the distance from communication may make calling for aid difficult if not impossible. Geography, distance and weather conditions make evacuation difficult. When few trained personnel are available to render essential medical attention, the result can be fatal.

Statistics confirm our subjective impression that ordinary accidents in Alaska can be fatal. Our accidental death rate per 100,000 population is more than double that of the remainder of the U. S. A full 33% of our deaths are attributed to the trauma caused by accidents, suicide, and homicide, compared to only 8% of the deaths in the rest of the U. S., being attributable to those causes. These awesome statistics highlight a need for a more systematic, dependable means of treating the victims of accidents or other medical emergencies.

EMERGENCY MEDICAL SERVICES SYSTEM (EMSS)

The passage, in 1973, of the national Emergency Medical Services Systems Act (P.L. 93-154) gave Alaska the resources to cope with our serious medical emergency problem. For the first time in the U. S. a comprehensive emergency medical services system was conceptualized in legislation and funds were appropriated to health agencies to identify and develop such a system. By enacting this law, Congress recognized that emergency medical services means something more than an ambulance carrying a patient to the nearest hospital emergency room. Two crucial factors in the care of the critically ill and injured were recognized: the speed with which definitive care is offered and the appropriateness of the care rendered.

In enumerating the factors relevant to appropriate care, the Emergency Medical Services Systems Act emphasized: (1) patient stabilization at the scene and during transfer by Emergency Medical Technicians (EMT) operating an appropriately equipped ambulance; (2) communication between the ambulance and the hospital so that verbal assistance may be given to the EMT at the scene; (3) rapid identification of situations in which patients require medical resources not available locally and a preplanned system of transferring patients to the appropriate facility; (4) transfer to rehabilitation facilities.

The Emergency Medical Services Systems Act emphasizes coordination between medical resources with overall administrative responsibility vested in a state agency and with operational authority vested in specific regions and localities throughout the state.

ALASKA'S EMERGENCY MEDICAL SYSTEM

Passage of P.L. 93-154 provides an opportunity for Alaska to use funds to permit us to replace the traditional informal response to crisis with a sophisticated, systematized approach.

In 1975, the Department of HEW, Division of Emergency Medical Services, approved a grant application from the Alaska Department of Health and Social Services. Alaska's first-year funds were aimed at three primary objectives: to establish a state office of Emergency Medical Services, to support the development of the Interior Region Plan of the Tanana Chiefs Health Authority in Fairbanks, and to establish a statewide infrastructure for regional coordination.

The state was divided into eight Emergency Medical Service regions, generally following the lines of the Indian Health Service boundaries, which in turn, conformed to primary patient flow patterns. Through contracts with nonprofit health corporations and local government entities, a regional coordinator was funded for each region. The regional coordinators formed local emergency medical services advisory councils, conducted resource and needs surveys of their regions, and wrote regional plans which were submitted for funding under the second-year grant. At the state level, staff were hired to administer the grant and to work closely with the regional coordinators to develop a coordinated statewide emergency medical service delivery system.

In 1976, the Department of Health and Social Services received second-year grant. This grant provided for continued support of the Interior Region program and the regional coordinators. Training monies for emergency medical technicians and other health care providers were also granted. During this second-year grant period, efforts will be made to involve the medical community in developing the emergency medical services system. The most important areas of physician involvement will be in the development of subsystems in the critical areas of cardiac problems, trauma, burns, poisoning, behavorial and neonatal care. Within each of these critical care areas, physicians will be asked to help determine the optimum levels of care and the best means of attaining those levels.

Already, progress has been made in the area of neonatal care. The Alaska Newborn Project, developed by Dr. David Spence of the Division of Public Health, Department of Health and Social Services, with the assistance of Dr. Thomas McCabe, has implemented a statewide support system for the care of high-risk infants. Three transport incubators with trained personnel, located in Fairbanks, Anchorage, and Juneau, stand ready to care for regional neonatal emergencies. High-risk infants will be transported by these units to Providence Hospital's Newborn Special Care Nursery where they will receive needed intensive care. A manual describing the use of the system, including procedures for the treatment, transportation and support of the newborn, has been written by Dr. Dion Roberts of Anchorage, and Dr. Thomas Porter of Anchorage. The High Risk Infant Transport Manual is being distributed to physicians and hospitals throughout the state.

Similar protocols for each critical care area will be implemented during the next several years. As the state's emergency medical services system is developed and implemented, each emergency patient's needs will be assessed as he/she enters the system to assure that the most appropriate care and treatment will be rendered.

Those of us who have lived in Alaska for any period of time, especially those who have lived in the rural and bush areas of the state, know the frustrations of obtaining adequate treatment for the victim of a life-threatening emergency. Such frustration is heightened when we know that the technology exists to provide the necessary care and to avoid unnecessary death and disability. The State of Alaska has begun an effort to develop a strong, comprehensive, statewide emergency medical services system. An administrative structure emphasizing the need for coordination has been established on both the state and regional levels. The program is ready to move forward. With the leadership of the medical community, no matter where in Alaska a medical emergency occurs, we can increase the victim's chances for survival.

HYPERTENSION

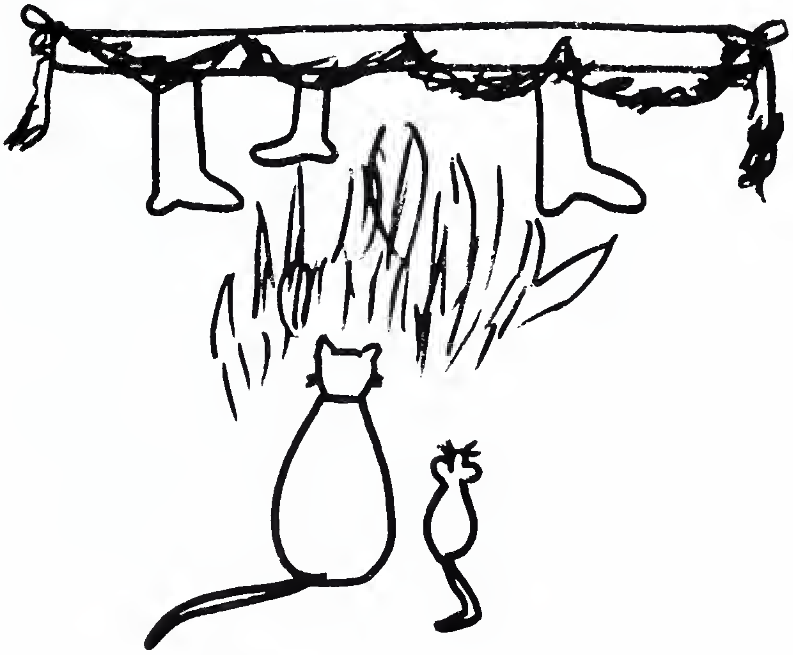
A Hypertension Medical Knowledge Self-Assessment Program believed to be the most extensive self-assessment program ever undertaken, will be introduced to the nation's physicians in January. The program is being developed by the Editorial Board of *Dialogues in Hypertension* in conjunction with the National Board of Medical Examiners by Health Learning Systems, Inc. in cooperation with the National High Blood Pressure Education Program, the Council for High Blood Pressure Research of the American Heart Association and the National Kidney Foundation.

Beginning in January with a confidential pre-course evaluation, the program will continue through early 1978. Participating physicians will receive a syllabus titled "Guide to the Clinical Management of Hypertension," containing a summary of hypertension clinical management information, four audio cassette tapes in which national authorities review current concepts in the detection, diagnosis and treatment of essential and secondary hypertension, and a confidential post-course self-assessment.

The Hypertension Medical Knowledge Self-Assessment Program is acceptable for 40 prescribed hours by the American Academy of Family Physicians. In addition, as an organization accredited for continuing medical education, the American Heart Association certifies that this continuing medical education offering meets the criteria for 40 credit hours in Category I for the Physician Recognition Award of the American Medical Association. The self-assessment program is computerized to assure accuracy and confidentiality, so only the physician taking the self-assessment evaluations will know his or her score.

Dr. James C. Hunt, President of The National Kidney Foundation and Professor and Chairman, Department of Medicine, Mayo Clinic and Mayo Medical School, is executive editor of the program's editorial board. Associate editors are: Dr. Theodore Cooper, Assistant Secretary for Health, United States Department of Health, Education and Welfare; Dr. Frank A. Finnerty, Jr., Professor of Medicine, Georgetown University Medical Center; Dr. John H. Laragh, Master Professor-of-Medicine, The New York Hospital—Cornell University Medical Center; Dr. Cameron G. Strong, Associate Professor of Medicine, Chairman, Division of Nephrology, Mayo Clinic and Mayo Medical School; and Dr. Louis Tobian, Jr., Professor of Medicine and Head, Hypertension Section, University of Minnesota Medical School.

Physicians who wish to participate in the hypertension medical knowledge self-assessment program may write to Health Learning Systems, Inc., P. O. Box 7929, Philadelphia, Pennsylvania 19101.



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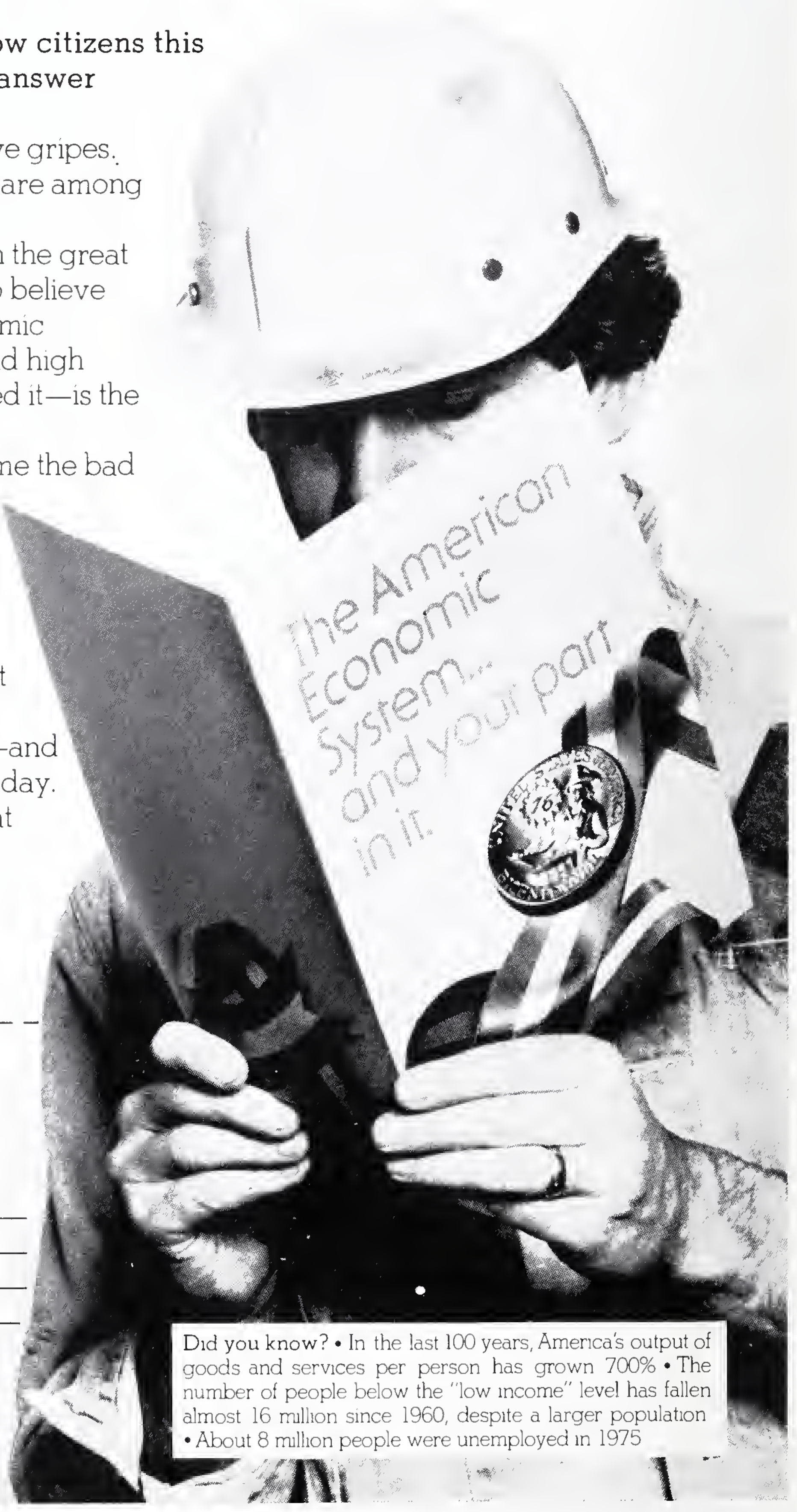
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NORTHERN HIGHLIGHTS — 26

SELECTED ABSTRACTS ON MEDICINE AND PUBLIC HEALTH IN THE NORTH

Health Care in the Canadian North and the Expanded Role of Nurses

McDermit, R. E.

Editorial. The provision of health services in Canada's northland: opportunity and challenge. *Can. J. Public Health 67:* 185-6, 1976.

This brief commentary highlights the current trends in health services in the Canadian north. This vast area of 1.3 million miles and only 40,000 people offers unique challenges in the use of scarce resources and in the expanded role of health professionals and paraprofessionals.

Emphasis is on prevention and ambulatory care, with hospitalization being used only when no other resources can do the job. Every attempt is being made to develop all necessary capabilities and facilities within the north itself. Most planning efforts are going into the health center concept.

Special studies are also being carried out, one recent one being in relation to handicapped persons, and another being an attempt to train more Northerners as providers in the system. A major challenge will be to integrate Federal and Territorial health programs into a unified provincial-type service.

Canada delivers health care to Eskimos in arctic region. *Hospitals, JAHA 49:* 51-54, Nov. 16, 1975.

This brief descriptive article gives several anecdotal accounts of the health care system in action in the Canadian Eastern Arctic.

According to the article, the cost of delivering health care to the 17,000 residents of the Yukon Territory and the 34,000 residents of the Northwest Territories is 6.5% more than the medical services budget for the rest of Canada's 21 million citizens. The system of care includes 10 hospitals, 2 cottage hospitals, and 40 nursing stations scattered over 1.5 million square miles.

The administrative center for the Eastern Arctic health program is located at Frobisher Bay, where a 33-bed hospital has 12 adult beds, 12 pediatric, 4 maternity, 2 intensive care, and 3 tuberculosis beds.

A big portion of the program's $4 million budget is transportation. The Medi-Vac service for the Eastern Arctic logged just under a half million miles in both 1973 and 1974. A recent outbreak of botulism in a family from Port Burwell cost over $10,000 in travel alone.

Thomas, G.

The role of the International Grenfell Association in health care delivery in Labrador and Northern Newfoundland. *Among the Deep Sea Fishers 73(1):* 2-8, 1975.

This paper gives an excellent brief survey of the development of the health program of the International Grenfell Association in Newfoundland and Labrador. The author has been the Director of I.G.A. for many years.

The program was founded as a medical mission by Dr. (later Sir) Wilfred T. Grenfell in 1892 and from its earliest years depended largely on volunteer physicians and a permanent rather low paid staff.

Over the years the scope of the mission's activity greatly expanded. A second hospital was added in 1912 in Northwest River, Labrador and a third in 1920 on the Quebec-Labrador coast. Most operating expenses were derived from voluntary contributions.

During the 1950's and 1960's, the program underwent a major period of growth. Nursing stations were established about 100-200 miles apart on the Labrador and Newfoundland coasts and St. Anthony became a major referral center for diagnosis and treatment. A new hospital was opened there in 1967.

In the early days the emphasis was on the case of the acutely ill. Later, in the 1950's, tuberculosis control became the major priority. In the 1960's and 1970's, however, the program turned increasingly to the care of chronic conditions, elective problems, and to community outreach. Several health centers were built during this time, staffed by a team of physicians, nurses and support personnel. Recently the system has developed close ties with the medical school of Memorial University in St. John's, Newfoundland.

At the present time, 95% of the cost of the health care system is borne by the taxpayers. The IGA, however, maintains much of the old spirit, and continues to attract an excellent and highly motivated staff.

Chambers, L. W.; Suttie, B.; Summers, V.

Expanded role nurses: an education program in Newfoundland and Labrador. *Can. J. Public Health 65:* 273-276, 1974.

This paper describes two pilot projects underway at Memorial University, St. John's, Newfoundland, for the training of nurses to assume an expanded role in primary health care. One project trains diploma or baccalaureate nurses for primary care work in isolated areas and the other trains them for work as an adjunct to urban practices in family medicine. The programs are offered cooperatively between the faculties of medicine and nursing.

The training is based on the recommendation of the "Boudreau Committee on the Nurse Practitioner" which defines the nurse in an expanded role as "oriented to the provision of primary care as a member of a team of health professionals, relating to families on a long-term basis . . . ." The role further involves first contact, accessibility, comprehensiveness, coordination of care, continuity of care, and family orientation.

The Memorial University program is one of about 12 similar programs in Canada, but perhaps the one which is more oriented toward independent duty in rural areas, reflecting the great need in the province. Special attention is given to therapeutics.

Evaluation will be centered on three aspects: (1) assessment of the student through the programs; (2) monitoring of graduates in their practice sites; and (3) the impact of graduates on the organization and delivery of primary care in Newfoundland.

Special attention is also being given to the legal aspects of such practitioner roles.

Black, D. P.; Riddle, R. J.; Sampson, E.

Pilot project: the family practice nurse in a Newfoundland rural area. *Can. Med. Assoc. J. 114:* 945-947, 1976.

This article describes an attempt to combine the traditional "outpost" nurse activities with those of the "urban" nurse practitioner working directly under the supervision of a physician. The project was carried out in an isolated area on the northeast coast of Newfoundland, where people live in 20 scattered villages within 65 km of Baie Verte. In the latter community, a 40-bed hospital provides backup medical services.

The "family practice nurse" was a concept developed to improve the direct care service in the outlying villages, while at the same time incorporating the preventive activities traditionally performed by the traveling public health nurses.

The nurse was given a one-year postgraduate training course, during which she was trained to monitor treatment of chronic conditions, assess and treat certain types of illness, assist in the care of the elderly in the village, carry on MCH programs, and promote health education within the community. She spent two-fifths of her time in the base station health center and the remaining three-fifths of her time in the pilot community. While at the health center she worked in the outpatient clinic, often seeing with a physician the problem cases referred in from her village. She also took regular emergency backup call at the health center and attended medical rounds and conferences. In the community she served as a primary health practitioner, while carrying out the traditional PHN duties relating to prevention.

The pilot project was "amazingly" free of problems and the community acceptance very high.

Sutherland, R.; Besner, J.

Community nursing in a northern setting. A challenge. *Nurs. Clin. N. Amer. 10:* 731-739, 1975.

This paper describes in some detail the type of work carried on in a northern nursing station in Canada, specifically at the Hay Lake Indian Reservation, Assumption, Alberta. The paper was prepared by two public health nurses who had had basic practitioner training before being assigned to this post.

The nurses engage in all the traditional public health nurse duties, such as MCH, health education, school health, tuberculosis control, nutrition and mental health care but in addition provide basic diagnosis and treatment. Because this particular station is not notably isolated, medical backup is fairly easily obtained.

Some of the problems of cross-cultural living, community attitudes and communication barriers are described, as are the unique satisfactions of this kind of work.

The nurses felt their nurse practitioner training enhanced their effectiveness and also gave them considerably more confidence in their abilities and the limits of their abilities.

Goldstein, J.

Nursing in the north. North/nord 40-45, Sept.-Oct., 1975.

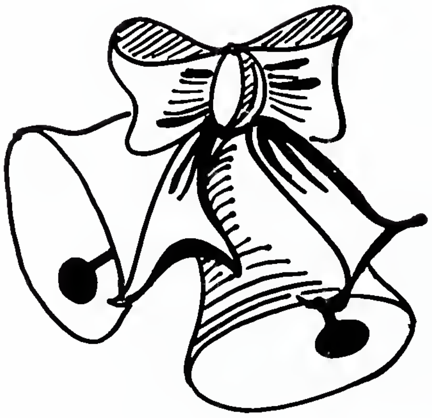
This popular article gives a description of the kinds of work and activities engaged in by the Northern Medical Services nurses in Canada. These nurses maintain and staff the network of small nursing stations across the Canadian Arctic.

In addition to providing acute care of accidents and illnesses, the nurses are involved in chronic care, tuberculosis surveillance, preventive services, nutrition, education, and other such activities. Patients are sent out to Churchill for hospitalization when necessary.

The nurses are assisted in the villages by Community Health Representatives, or CHR's, who are Indian or Eskimo men and women chosen jointly by the Community Councils and the Medical Services staff. These CHR's receive training in prevention and health education and, of course, speak the language of the local people. They can also identify with the villagers and help gain acceptance for modern medical care.

Besides these, the nurses are also involved in a variety of other activities in health, including family planning, environmental health, firearms education, and prenatal care.

Robert Fortuine, M.D.



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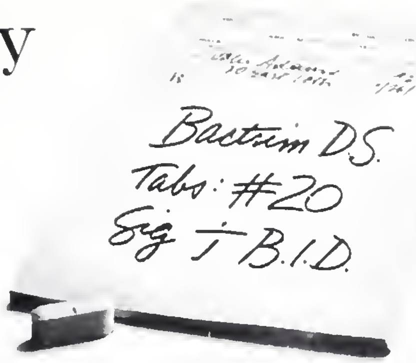
10-day Bactrim therapy outperforms 10-day ampicillin therapy.



In a multicenter, double-blind study of patients with chronic or frequently recurrent urinary tract infection, Bactrim 10-day therapy outperformed ampicillin 10-day therapy by 27.2%, when comparing patients who maintained clear cultures for eight weeks. Criterion for "clear culture" was 1000 or fewer organisms/ml of urine.

While adverse reactions noted in this study were mild (*e.g.*, vomiting, nausea, rash), more serious reactions can occur with these drugs. See manufacturer's product information for complete listing. Maintain adequate fluid intake; perform frequent CBC's and urinalyses with microscopic examination.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

Double Strength tablets
Just 1 tablet B.I.D.

Bactrim™

(80 mg trimethoprim and 400 mg sulfamethoxazole)

2 tablets B.I.D.

For chronic or frequently recurrent cystitis and pyelonephritis due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections. The recommended quantitative disc susceptibility method (*Federal Register, 37:*20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **Data are insufficient to recommend use in infants and children under 12.**

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole; fruit-licorice flavored—bottles of 16 oz (1 pint).

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In a multicenter study of patients with chronic or frequently recurrent urinary tract infections

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Bactrim was 27.2%[*] more effective than ampicillin in keeping patients infection-free for 8 weeks.[†]

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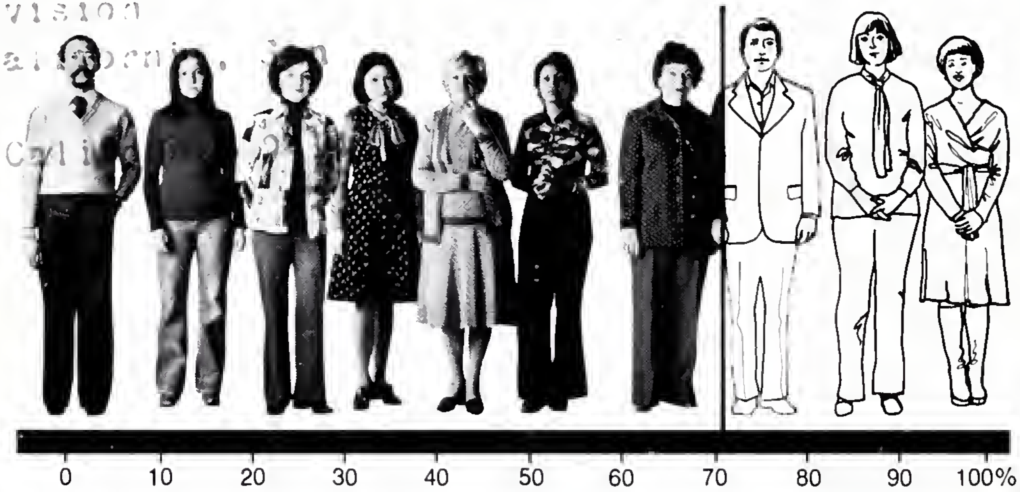
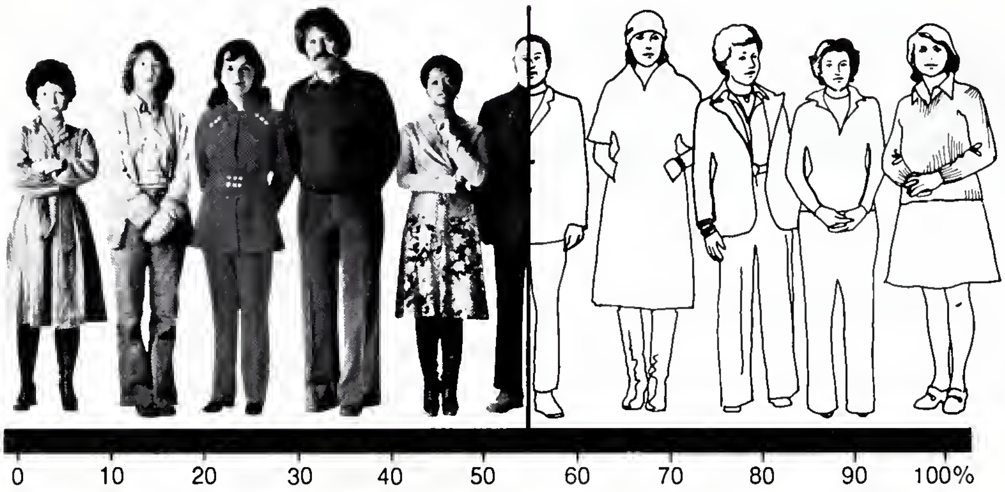


Bactrim–70.5% of 78 patients infection-free at 8 weeks.



ampicillin–55.4% of 74 patients infection-free at 8 weeks.

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[*] This percentage is arrived at by the statistical method of dividing the difference between Bactrim and ampicillin results (15.1%) by the percent of ampicillin results (55.4%).

[†] Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

Double Strength tablets
Just 1 tablet B.I.D.

Please see summary of product information on preceding page. ROCHE

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

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